# PHYSOR-2004

## The Physics of Fuel Cycles and Advanced Nuclear Systems: Global Developments

April 25-29, 2004
Preliminary Program

www.physor2004.anl.gov

## Table of Contents





We welcome your participation at the PHYSOR-2004 Topical Meeting in April, 2004. Over 60 years ago, Chicago served as the birthplace of nuclear reactor technology. Today, the city provides a fitting location for the presentation of global developments in reactor and fuel cycle physics for mature technologies, and for a new generation of nuclear systems.

Best Regards,

Massimo Salvatores
*General Chairs, PHYSOR-2004*

Yoon Chang

**PHYSOR 2004 is a topical meeting sponsored by the Reactor Physics Division of the American Nuclear Society, and co-sponsored by the Mathematics & Computation Division.**

Non-financial support is also provided by these organizations: Atomic Energy Society of Japan, Brazilian National Atomic Energy Commission, British Nuclear Energy Society, The Belarus, Bulgarian, Canadian, Croatian, European, French, Hungarian, Israel, Korean, and Swiss Nuclear Societies, OECD/NEA, Romanian Nuclear Energy Association, and Nuclear Society of Slovenia.

The following companies and organizations have made generous financial contributions to the success of PHYSOR 2004. Their support is greatly appreciated.

**Areva, Inc**.
(Banquet Sponsor)

**Studsvik of America**

**United States Department of Energy**
(Supporting Student Programs)

Dear Colleague,

The Reactor Physics Division of the American Nuclear Society (ANS) appreciates your participation in the PHYSOR-2004 Topical Meeting, held at the Hyatt Regency Hotel, Chicago, Illinois. This four-day meeting is hosted by the Chicago Section of the ANS and co-sponsored by many international organizations.

The theme of the meeting is *The Physics of Fuel Cycles and Advanced Nuclear Systems: Global Developments*. The technical sessions cover 21 separate topics, and 5 plenary sessions with internationally known speakers are also on the schedule. On the following pages, we are pleased to provide the agenda for the technical sessions and other special events. The scheduled date and time for each presentation are also provided.

In addition to the technical program, we want to remind you about three special events that are taking place on the days before and after the meeting.

- **MCNP Criticality Workshop**, Sunday, April 25, 1 to 5 pm. This free workshop will be held at the Hyatt Regency. The session will include an overview of MCNP criticality calculations and specific discussions of new features in MCNP5, including mesh tallies, the ENDF66 and SAB2002 nuclear data libraries, and generation of temperature-specific nuclear data libraries. In addition, there will be discussion of additional capabilities being developed for the next release of MCNP. Presenters will be Forrest Brown and Russ Mosteller from the MCNP team at Los Alamos National Laboratory. Meeting registration is required to participate in this workshop.
- **Welcome Reception at the Art Institute of Chicago,** Sunday, April 25, 6 to 9 pm. One ticket to this special reception is included with your conference registration. The reception will be held on Sunday evening, from 6 to 9 PM, and will include access to the Grand Staircase, the Gunsaulus Hall, and viewing of the Chagall Windows and the Impressionists and Post-Impressionists exhibits. The Art Institute is just a short walk from the Hyatt.

- **Generation-IV Reactor Physics Workshop**, Friday, April 30, 8 am to 5 pm. The intent of this workshop is to have international experts present/discuss ongoing R&D activities in the design and evaluation of the advanced nuclear systems. Core physics design and nuclear data needs and issues will be discussed along with proposals for international collaborations for meeting these needs. This all-day workshop will have presentations and discussion sessions. It will be held at the Hyatt Regency and meeting registration is required.

We encourage you to participate in these events as your schedule allows. We are looking forward to a full and informative meeting and hope you enjoy your stay in Chicago!

Best Regards,

P Finck

Phillip Finck, Technical Program Committee Chair, PHYSOR-2004

# Hotel and Local Area Information

The PHYSOR-2004 meeting will be held at the Hyatt Regency in downtown Chicago. The Hyatt is located at 151 East Wacker Drive, near the lakefront and just north of the heart of the Chicago business district (the "loop").

Reservations can be made by calling the Hyatt Reservation Desk at 312/565-1234 or 800/233-1234. When calling the reservation desk, be sure to mention that you are attending the American Nuclear Society topical meeting PHYSOR-2004. You can also make hotel reservations on-line by following the special link on our website at www.physor2004.anl.gov/hotel.htm.

Reservations made before March 26, 2004 are guaranteed a special meeting room rate of $174 (U.S.) per night (single- or double-occupancy), plus applicable taxes. After March 26, reservations for special-rate rooms will be accepted on an "as available" basis. When making your reservation by phone, please indicate that you are attending the PHYSOR-2004 meeting to receive the special meeting rate.


Valet parking at the Hyatt Regency is available. Overnight parking with in/out privileges is $35; daytime parking is $16 (out by 7 p.m.). Self-parking lots are also located near the hotel. The East and West Tower Doormen at the Hyatt Regency will be happy to secure a cab for your return trip to either airport, or to any other destination.

Chicago is served by both O'Hare International (ORD) and Midway (MDW) Airports, with domestic and international flights offered by many carriers. From either airport, rental car, limousine, shuttle service, taxi, or public transportation (www.transitchicago.com) can be used to reach the Hyatt, and other downtown destinations.


Many restaurants and other entertainment attractions are within walking distance of the hotel, or you can use public transportation or taxi service. Chicago attractions include

- The Field Museum of Natural History, Shedd Aquarium, Adler Planetarium
- Navy Pier, Michigan Avenue, Water Tower Place
- Broadway in Chicago, The Chicago Theater, Second City Comedy Club
- Wrigley Field (Chicago Cubs), U.S. Cellular Field (Chicago White Sox)

# PHYSOR-2004 Meeting Schedule

## (All events at the Hyatt Regency Chicago unless otherwise indicated)

| Day | Session | Time | Room | Session |
|---|---|---|---|---|
| **Sunday, April 25** | | 1:00 PM - 5:00 PM | Columbus EF | MCNP5 Criticality Workshop |
| | | 6:00 PM - 9:00 PM | *Art Institute* | *Welcome Reception at Art Institute of Chicago* |
| **Monday, April 26** | | 7:00 AM - 8:00 AM | *TBA* | **Speakers' Breakfast** |
| | | 8:30 AM - 12:00 PM | Grand AB | **Plenary Session** - *International Perspectives in Reactor Physics* |
| | | 12:00 PM - 1:30 PM | Columbus IJKL | **Luncheon** - *Historical Perspectives on Reactor Physics Experiments* |
| | 1A | 1:30 PM - 4:50 PM | Columbus EF | International Collaboration in Reactor Physics |
| | 1B | 1:30 PM - 4:50 PM | Columbus G | Monte-Carlo Methods and Developments |
| | 1C | 1:30 PM - 4:50 PM | Columbus H | Reactor Physics Benchmarks and Experiments |
| | 1D | 1:30 PM - 4:50 PM | Grand A | Reactor Analysis Methods |
| | | 3:10 PM - 3:30 PM | | **Break - All sessions** |
| | | 5:00 PM - 7:00 PM | Grand AB | **Special Session** - *Reactor Physics for Future Nuclear Systems* |
| **Tuesday, April 27** | | 7:00 AM - 8:00 AM | *TBA* | **Speakers' Breakfast** |
| | | 8:30 AM - 9:45 AM | Grand AB | **Plenary Session** - *Current Needs in Reactor Physics* |
| | | 9:45 AM - 10:00 AM | | **Break** |
| | 2A | 10:00 AM - 12:00 PM | Columbus EF | Deep-Burn Physics and Methodology |
| | 2B | 10:00 AM - 12:00 PM | Columbus G | Accelerator Applications and Spallation Physics |
| | 2C | 10:00 AM - 12:00 PM | Columbus H | Reactor Physics and Materials Issues |
| | 2D | 10:00 AM - 12:00 PM | Grand A | Advances in LWR Analyses |
| | | 12:00 PM - 1:00 PM | | **Lunch Break** |
| | | 1:00 PM - 2:15 PM | Grand AB | **Plenary Session** - *Experimental Activities in Reactor Physics* |
| | | 2:15 PM 2:30 PM | | **Break** |
| | 3A | 2:30 PM - 4:50 PM | Columbus EF | Reactor and Neutron Physics |
| | 3B | 2:30 PM - 4:50 PM | Columbus G | Research Reactors |
| | 3C | 2:30 PM - 4:50 PM | Columbus H | Fuel Cycle Physics |
| | 3D | 2:30 PM - 4:50 PM | Grand A | Criticality Benchmarks |
| | 4A | 5:00 PM - 7:00 PM | Crystal Ballroom Foyer | Poster Session and Reception |
| | | 7:00 PM - 10:00 PM | Crystal Ballroom | **Banquet** |

# PHYSOR-2004 Meeting Schedule

## (All events at the Hyatt Regency Chicago unless otherwise indicated)

| Day | Session | Time | Room | Session |
|---|---|---|---|---|
| **Wednesday, April 28** | | 7:00 AM - 8:00 AM | *TBA* | **Speakers' Breakfast** |
| | 5A | 8:30 AM - 11:50 AM | Columbus EF | Fuel/Core Design and Analysis |
| | 5B | 8:30 AM - 11:50 AM | Columbus G | Gas-Cooled Reactors |
| | 5C | 8:30 AM - 11:50 AM | Columbus H | Critical and Subcritical Experiments |
| | 5D | 8:30 AM - 11:50 AM | Wrigley | Reactor Analysis Methods |
| | | 10:10 AM - 10:30 AM | | **Break** |
| | | 12:00 PM - 1:30 PM | Columbus IJKL | **Luncheon** - *Emerging Areas in Reactor Physics* |
| | 6A | 1:30 PM - 4:50 PM | Columbus EF | Advanced Reactor Designs |
| | 6B | 1:30 PM - 4:50 PM | Columbus G | Nuclear Safety |
| | 6C | 1:30 PM - 4:50 PM | Columbus H | Physics Code Validation |
| | 6D | 1:30 PM - 4:50 PM | Wrigley | Reactor Analysis Methods |
| | | 3:10 PM - 3:30 PM | | **Break - All sessions** |
| **Thursday, April 29** | | 7:00 AM - 8:00 AM | *TBA* | **Speakers' Breakfast** |
| | | 8:30 AM - 9:45 AM | Regency A | **Plenary Session** - *Efforts in Code Development and Reactor Modeling* |
| | 7A | 10:00 AM - 12:00 PM | Columbus EF | Non-Conventional Reactors |
| | 7B | 10:00 AM - 12:00 PM | Columbus G | Nuclear Data |
| | 7C | 10:00 AM - 12:00 PM | Columbus H | Nuclear Safety |
| | 7D | 10:00 AM - 12:00 PM | Columbus IJ | Physics and Modeling of Research Reactors in INIE's Big-10 Consortium |
| | | 12:00 PM - 1:00 PM | | **Lunch Break** |
| | 8A | 1:00 PM - 3:20 PM | Columbus EF | Fuel Cycle Physics |
| | 8B | 1:00 PM - 3:40 PM | Columbus G | Nuclear Data |
| | 8C | 1:00 PM - 3:20 PM | Columbus H | Physics Code Validation |
| | 8D | 1:00 PM - 3:40 PM | Columbus IJ | Reactor Analysis Methods |
| **Friday, April 30** | | 8:00 AM - 5:00 PM | Columbus EF | Generation IV Reactor Physics Workshop |

The technical sessions will cover the 21 topics listed below. An abstract book and CD-ROM containing all papers presented in the technical and poster sessions is included with the meeting registration. Additional CD-ROMs may be purchased when you complete your meeting registration.

*Accelerator Applications and Spallation Physics*
*Advanced Reactor Designs*
*Advances in LWR Analyses*
*Critical and Subcritical Experiments*
*Criticality Benchmarks*
*Deep-Burn Physics and Methodology*
*Fuel Cycle Physics*
*Fuel/Core Design and Analysis*
*Gas-Cooled Reactors*
*International Collaboration in Reactor Physics*
*Monte-Carlo Methods and Developments*
*Non-Conventional Reactors*
*Nuclear Data*
*Nuclear Safety*
*Physics and Modeling of Research Reactors in INIE's Big-10 Consortium*
*Physics Code Validation*
*Reactor Analysis Methods*
*Reactor and Neutron Physics*
*Reactor Physics and Materials Issues*
*Reactor Physics Benchmarks and Experiments*
*Research Reactors*

Speakers are allotted 20 minutes for their presentation, including questions. Overhead and LCD projection equipment will be available, and arrangements are being made to have laptop computers available in each meeting room. We suggest that you bring your presentation on a CD-ROM or portable USB-drive in Adobe Acrobat (.pdf) or PowerPoint (.ppt) format. Please test the file on one of the computers ahead of your session time. In the event of an incompatibility of file formats, presenters should be prepared with an alternative (e.g. their own laptop computer or overhead transparencies).

# PHYSOR-2004 Meeting Program

## Monday, April 26, 2004, 8:30 A.M.

**Plenary Session - International Perspectives in Reactor Physics** *Grand AB*

Jacques Bouchard (French Atomic Energy Commission - CEA)

Nicolai Ponomarev-Stepnoi (Kurchatov Institute)

Yosiaki Oka (University of Tokyo)

Burton Richter (Stanford Linear Accelerator Center)

## Monday, April 26, 2004, 12:00 P.M.

**Luncheon** *Columbus IJKL*

*Historical Perspectives on Reactor Physics Experiments*, Massimo Salvatores

## Monday, April 26, 2004, 1:30 P.M.

**Session 1A International Collaboration in Reactor Physics** *Columbus EF*

Session Organizers: Thomas J. Downar (Purdue University). Session Chairs: Thomas J. Downar (Purdue University), Jean-Pascal Hudelot (CEA Cadarache).

1:30 PM The Numerical Nuclear Reactor for High Fidelity Integrated Simulation of Neutronic, Thermal-Hydraulic and Thermo Mechanical Phenomena - Project Overview, David P. Weber (ANL)

1:50 PM Methods and Performance of a Three-Dimensional Whole-Core Transport Code DeCART, Han Gyu Joo, Jin Young Cho, Kang Seog Kim, Chung Chan Lee, Sung Quun Zee (Korea Atomic Energy Research Institute)

2:10 PM Consistent Comparison of Monte Carlo and Whole-Core Transport Solutions for Cores with Thermal Feedback, Han Gyu Joo, Jin Young Cho, Kyo Youn Kim, Moon Hee Chang (Korea Atomic Energy Research Institute), Beom Seok Han, Chang Hyo Kim (Seoul National University)

2:30 PM Evaluation of Turbulence Models for Flow and Heat Transfer in Fuel Rod Bundle Geometries, Tanju Sofu (ANL)

2:50 PM Methodology for Coupling Computational Fluid Dynamics with Integeral Transport Neutronics, Justin W Thomas, Zhaopeng Zhong (Purdue University), Tanju Sofu (ANL), Thomas J. Downar (Purdue University)

3:10 PM *Break*

3:30 PM Coupled Calculations using the Numerical Nuclear Reactor for Integrated Simulation of Neutronic and Thermal-Hydraulic Phenomena, David P. Weber (ANL)

3:50 PM OSMOSE: An Experimental Program for the Qualification of Integral Cross Sections of Actinides, Jean-Pascal Hudelot (CEA Cadarache), Raymond Klann (ANL), Phillippe Fougeras (CEA Cadarache), Xavier Genin, Nicolas Drin (CEA Valrho), Louis Donnet (CEA)

4:10 PM MINERVE Reactor Characterization in Support of the OSMOSE Program: Spectral Indices, Raymond Klann (ANL), Jean-Pascal Hudelot, Muriel Antony (CEA Cadarache), Bradley Micklich, George Imel (ANL), Gregory Perret (CEA), Jean-Michel Girard, Valerie Laval (CEA Cadarache)

4:30 PM HTR-N Plutonium Cell Burnup Benchmark: Definition, Results & Intercomparison, Jim C. Kuijper (NRG)

**Session 1B Monte-Carlo Methods and Developments** *Columbus G*

Session Organizers: Forrest Brown (LANL), Richard Sanchez (CEA), Laurie Waters (LANL). Session Chairs: J. Eduard Hoogenboom (Delft University of Technology), William R. Martin (University of Michigan).

1:30 PM Monte Carlo Parameter Studies and Uncertainty Analyses with MCNP5, Forrest Brown (LANL), Robert Bruce Hayes (Washington TRU Solutions)

1:50 PM Theoretical and Practical Study of the Variance and Efficiency of a Monte Carlo Calculation due to Russian Roulette, J. Eduard Hoogenboom (Delft University of Technology)

2:10 PM Variance Reduction Techniques for the Monte Carlo Simulation of Neutron Noise Measurements, Máté Szieberth (Budapest University of Technology and Economics), Jan Leen Kloosterman (Delft University of Technology)

2:30 PM Two Dimensional Functional Expansion Tallies for Monte Carlo Simulations, David P. Griesheimer, William R. Martin (University of Michigan)

2:50 PM Point KENO V.a: A Continuous-Energy Monte Carlo Code for Criticality Safety Applications, Michael Dunn, Maurice Greene, Dan F. Hollenbach, L. M. Petrie (ORNL)

3:10 PM *Break*

3:30 PM Eigenfunction Convergence and Transmutation Enhancements in MCNPX, Gregg McKinney, Holly Trellue, John Hendricks, Laurie Waters (LANL)

3:50 PM Continuously Varying Material Properties and Tallies for Monte Carlo Calculations, Forrest Brown (LANL), David P. Griesheimer, William R. Martin (University of Michigan)

4:10 PM Calculation of the Effective Delayed Neutron Fraction Using Monte Carlo Techniques, Steven C. Van Der Marck, Robin Klein Meulekamp (NRG)

4:30 PM Benchmark of MONTEBURNS against Measurements on Irradiated UOX and MOX Fuels, Christos Trakas, Lucien Daudin (FRAMATOME-ANP)

**Session 1C Reactor Physics Benchmarks and Experiments** ***Columbus H***

Session Organizers: Russell D. Mosteller (LANL), Robert Jacqmin (CEA Cadarache), Hironobu Unesaki (Kyoto University). Session Chairs: Rakesh Chawla (Paul Scherrer Institute), Farzad Rahnema (Georgia Institute of Technology).

1:30 PM Analysis of Benchmark Results for Reactor Physics of LWR Next Generation Fuels, Takanori Kitada (Osaka University), Keisuke Okumura (Japan Atomic Energy Research Institute), Hironobu Unesaki (Kyoto University), Etsuro Saji (Secretariat of The Nuclear Safety Commission)

1:50 PM Validation of Depletion Calculation through TAKAHAMA-3 Chemical Assays with JEFF3.0, Arnaud Courcelle, Alain Santamarina (CEA)

2:10 PM Analysis of the HTR-10 Initial Core with a Monte Carlo Code MVP, Yasunobu Nagaya, Keisuke Okumura, Takamasa Mori (JAERI), Wataru Nakazato (Tokyo Institute of Technology)

2:30 PM OECD/NEA International Benchmark on 3-D VENUS-2 MOX Core Measurements, Nadia Messaoudi (Belgian Nuclear Research Centre, SCK·CEN), Byung-chan Na (OECD/Nuclear Energy Agency)

2:50 PM BN-600 Full MOX Core Benchmark Analysis, Y. I. Kim (IAEA), R. Hill, K. Grimm (ANL), G. Rimpault (CEA Cadarache), T. Newton (Serco Assurance), Z. H. Li (CIAE), A. Rineiski (FZK/IKET), P. Mohanakrishnan (IGCAR), M. Ishikawa (Japan Nuclear Cycle Development Institute), K. B. Lee (KAERI), A. Danilytchev, V. Stogov (IPPE)

3:10 PM *Break*

3:30 PM JOYO MK-III Performance Test at Low Power and Its Analysis, Gou Chiba (Japan Nuclear Cycle Development Institute)

3:50 PM High Moderation BWRs Fully Loaded with MOX Fuel: The BASALA Experimental Programme, Stephane Cathalau (French Atomic Energy Commission)

4:10 PM The Experimental Determination of the Relative Abundances and Decay Constants of Delayed Neutrons of the IPEN/MB-01 Reactor, Adimir Dos Santos, Ricardo Diniz, Rogerio Jerez, Luis Antonio Mai, Mitsuo Yamaguchi (Instituto de Pesquisas Energeticas e Nucleares)

4:30 PM The Experimental Determination of the Effective Delayed Neutron Parameters: Beff, Beff/LAMBDA and LAMBDA of the IPEN/MB-01 Reactor, Adimir Dos Santos, Ricardo Diniz, Leda C. C. B. Fanaro, Rogerio Jerez, Graciete S. A. Silva, Mitsuo Yamaguchi (Instituto de Pesquisas Energeticas e Nucleares)

**Session 1D Reactor Analysis Methods** ***Grand A***

Session Organizers: Giuseppe Palmiotti (ANL), Giovanni Bruna (Framatome ANP), Jasmina Vujic (UC Berkley). Session Chairs: Giovanni Bruna (Framatome ANP), Giuseppe Palmiotti (ANL).

1:30 PM Status of Reactor Analysis Methods and Codes in the U.S.A., Won Sik Yang, Temitope A. Taiwo (ANL)

1:50 PM Validation of WIMS9, Tim Newton, Les Hutton, Ray Perry (Serco Assurance)

2:10 PM Application of the DSA Preconditioned GMRES Formalism to the Method of Characteristics - First Results , Romain Le Tellier, Alain Hebert, Professor (Ecole Polytechnique de Montreal)

2:30 PM Improvement of the SPH Method for Multi-Assembly Calculations, Akio Yamamoto, Yasunori Kitamura, Yoshihiro Yamane (Nagoya University)



2:50 PM Method of Characteristics Applied to a MTR Whole Core Modeling, Alain Aggery, Corinne D'aletto, Jacques Di-salvo, Richard Sanchez, Simone Santandrea, Michel Soldevila, Guy Willermoz (CEA)

3:10 PM *Break*

3:30 PM 3D Characteristics Method with Linearly Anisotropic Scattering, Mohamed Dahmani, Robert Roy, Jean Koclas (École Polytechnique de Montréal)

3:50 PM A Mutual Resonance Shielding Model Consistent with Ribon Subgroup Equations, Alain Hebert (Ecole Polytechnique de Montreal)

4:10 PM Sensitivity Studies on Cross-Section Generation and Modeling for BWR Core Simulation Using SAPHYR Code System, Nadejda Todorova, Kostadin Ivanov (Pennsylvania State University), Emmanuel Rigaut, Eric Denis Royer (CEA)

4:30 PM About Axial Diffusion Coefficient Calculation Analysis, Tamara Semeonovna Poveschenko, Nickolay Ilyich Laletin (RRC 'Kurchatov Institute')

## Monday, April 26, 2004, 5:00 P.M.

**Special Session - Reactor Physics for Future Nuclear Systems** ***Grand AB***

Hussein Khalil (Argonne National Laboratory)

Jean-Claude Gauthier (Framatome)

## Tuesday, April 27, 2004, 8:30 A.M.

**Plenary Session - Current Needs in Reactor Physics** ***Grand AB***

*Needs Related to the Nuclear Power Industry*, Kord Smith (Studsvik-Scandpower)

*Needs Related to Nuclear Fuel Cycle Initiatives*, Christine Brown (British Nuclear Fuels plc)

## Tuesday, April 27, 2004, 10:00 A.M.

**Session 2A Deep-Burn Physics and Methodology** ***Columbus EF***

Session Organizers: Alan Baxter (General Atomics), Giovanni Bruna (Framatome ANP), Alexander Stanceulescu (IAEA). Session Chairs: Giovanni Bruna (Framatome ANP).

10:00 AM Uncertainty Analysis and Optimization Studies on the Deep-Burner Modular Helium Reactor (DB-MHR) for Actinide Incineration, Giovanni B. Bruna, Rocco Labella, and Christos Trakas (FRAMATOME-ANP), Alan Baxter and Carmelo Rodriguez (General Atomics), Francesco Venneri (LANL)

10:20 AM PBMR Deep-Burn: A Pebble-Bed HTGR Burning Its Own 'Waste', Dirceu F. Da Cruz, J.B.M. De Haas, A.I. Van Heek (NRG)

10:40 AM HTGR Actinide Burner Feasibility Studies: Calculation Scheme Related Considerations, Frederic Damian (CEA), Patrick Blanc-Tranchant (CEA - Saclay), Xavier Raepsaet (CEA - Saclay), Jean-Christophe Klein (CEA - Cadarache), Florence Dolci, Oliver Koberl (CEA)

11:00 AM Studies of a Deep Burn Fuel Cycle for the Incineration of Military Plutonium in the GT-MHR using the Monte-Carlo Burnup Code, Alberto Talamo, Waclaw Gudowski (Royal Institute of Technology)

11:20 AM Spectral Shift Methodology for 'Deep-Burnup' of Uranium-Thorium-Hydride-Fuel, Zeev Shayer (University of Denver)

11:40 AM Cascade Reactor Concept for Neutron Multiplication of Subcritical Core, Kazumi Ikeda, Takako Shiraki (Mitsubishi Heavy Industries, Ltd.)

**Session 2B Accelerator Applications and Spallation Physics** ***Columbus G***

Session Organizers: Eric Pitcher (LANL), Stefano Monti (ENEA), Hiroyuki Oigawa (JAERI). Session Chairs: Eric Pitcher (LANL).

10:00 AM Research and Development Activities for Accelerator Driven System at JAERI, Kazufumi Tsujimoto, Toshinobu Sasa, Hiroyuki Oigawa (Japan Atomic Energy Research Institute)

10:20 AM The Utilization of Small Accelerators to Drive a Zero Power Sub Critical Reactor. A Review of R&D at IPEN-CNEN and IFUSP, José Rubens Maiorino (Institute for Energetic and Nuclear Research (IPEN)), Sérgio Anéfalos Pereira (Institute of Physics (IFUSP))

10:40 AM The TRADE Experiment: Status of the Project and Physics of the Spallation Target, Stefano Monti, Carlo Rubbia (ENEA), Massimo Salvatores (CEA/ANL), Nunzio Burgio, Mario Carta, Pietro Agostini, Fabrizio Pisacane, Alfonso Santagata (ENEA), Cecille Krakowiak-Aillaud (CEA), Yacine Kadi (European Organization for Nuclear Research), Eric Pitcher (LANL), Jean-Claude Steckmeyer (CNRS), Cornelis Broeders, Dankward Struwe (Karlsruhe), Adonai Herrera-Martinez (University of Cambridge)

11:00 AM Impact of Heterogeneous Cm Distribution on Proton Source Efficiency in Accelerator-driven Systems, Per Seltborg, Jan Wallenius, Waclaw Gudowski (Royal Institute of Technology)

11:20 AM Reactor-Accelerator Coupled Experiments (RACE): A Feasibility Study at TAMU, William S. Charlton, Venkat Krishna Taraknath Woddi (Texas A&M University)

11:40 AM Towards an Improved GELINA Neutron Target, Marek Flaska, Arjan Plompen, Willy Mondelaers (IRMM-JRC-EC), Danny Lathouwers, Tim Van Der Hagen Jr., Hugo Van Dam (Delft University of Technology)

**Session 2C Reactor Physics and Materials Issues** ***Columbus H***

Session Organizers: Abderrafi M. Ougouag (INEEL). Session Chairs: Abderrafi M. Ougouag (INEEL).

10:00 AM Displacement Kerma Cross Sections for Neutron Interactions in Molybdenum, Abderrafi Ougouag, Charles A. Wemple, Clinton Van Siclen (INEEL)

10:20 AM Thermal Neutron Scattering Cross Sections of Thorium Hydride, Iyad I. Al-qasir, Ayman I. Hawari, Victor Hugo Gillette, Bernard W. Wehring, Tong Zhou (North Carolina State University)

10:40 AM EPRI BWRVIP 3-D RAMA Fluence Methodology Benchmarking, Steven Baker (TransWare Enterprises Inc.)

11:00 AM Ab Initio Generation of Thermal Neutron Scattering Cross Sections, Ayman I. Hawari, Iyad I. Al-qasir, Victor Hugo Gillette, Bernard W. Wehring, Tong Zhou (North Carolina State University )

11:20 AM Support Vector Machine in Classification of Positron Lifetime Spectra, Senada D. Avdic (Senada Avdic)

11:40 AM Research Reactor Application to Iridium-192 Production for Cancer Treatment, Maria Elisa C. M. Rostelato, Constancia Silva, Paulo Roberto Rela, Carlos Zeituni, Vladimir Lepki, Anselmo Feher (Nuclear Energy National Commission, CNEN - BRAZIL)

**Session 2D Advances in LWR Analyses** ***Grand A***

Session Organizers: Marvin Adams (Texas A&M University). Session Chairs: Marvin Adams (Texas A&M University).

10:00 AM Renormalized Treatment of the Double Heterogeneity with the Method of Characteristics, Richard Sanchez (CEA)

10:20 AM Coarse-Mesh Discretized Low-Order Quasidiffusion Equations for Subregion Averaged Scalar Fluxes, Dmitriy Y. Anistratov (North Carolina State University)

10:40 AM Application of a Heterogeneous Coarse Mesh Transport Method to a MOX Benchmark Problem, Benoit Forget, Farzad Rahnema, Scott W. Mosher (Georgia Institute of Technology)

11:00 AM Spatially Consistent Coarse-Mesh Discretization of the Low-Order Quasidiffusion Equations, Hikaru Hiruta, Dmitriy Y Anistratov (North Carolina State University)

11:20 AM The Implementation of Pin-Cell Discontinuity Factors in PARCS Using an Artificial Neural Network with Application to MOX Fuel Analysis, Tomasz Kozlowski, Deokjung Lee, Thomas J. Downar (Purdue University)

11:40 AM Diagnostic Tool for Assessing Anomalous Trends in BWR Core Tracking, Anna Smolinska, John Rea, Atul Karve, Kenneth Gardner (Global Nuclear Fuel)

## Tuesday, April 27, 2004, 1:00 P.M.

**Plenary Session - Experimental Activities in Reactor Physics** ***Grand AB***

*The International Program TRADE - TRIGA Accelerator Driven Experiments*, George Imel (Argonne National Laboratory)

*Nuclear Cross Section Measurements within the Advanced Fuel Cycle Initiative*, Eric Pitcher (Los Alamos National Laboratory)



## Tuesday, April 27, 2004, 2:30 P.M.

**Session 3A Reactor and Neutron Physics** ***Columbus EF***

Session Organizers: Enrique M. Gonzalez-Romero (CEEMT), Robert N. Hill (ANL). Session Chairs: Enrique M. Gonzalez-Romero (CEEMT), Robert N. Hill (ANL).

2:30 PM New Resonant Mixture Self-Shielding Treatment in the APOLLO2 Code, Mireille Coste-Delclaux (CEA)

2:50 PM Extension of KIN3D, a Kinetics Capability of VARIANT, for Modeling Fast Transients in Accelerator Driven Systems, Cristian Rabiti (Forschungszentrum Karlsruhe, Institut für Kern- und Energietechnik (FZK/IKET)), Andrei Rineiski (Forschungszentrum Karlsruhe)

3:10 PM Reactivity Assessment and Spatial Time-Effects from the MUSE Kinetics Experiments, Mario Carta, Antonio D'angelo, Vincenzo Peluso (ENEA), Gerardo Aliberti, Giuseppe Palmiotti, George Imel (ANL), Jean Francois Lebrat (CEA), Enrique M. Gonzalez-Romero (Centro de Estudios Energéticos Medioambientales y Tecnológicos ), David Villamarin (CIEMAT), Sandra Dulla , Fabrizio Gabrielli, Piero Ravetto (Politecnico di Torino), Massimo Salvatores (ANL)

3:30 PM Monte Carlo Modeling of a Time-of-Flight (ToF) Experiment for Determination of Fe Scattering Cross Sections, Michael T. Wenner, Alireza Haghighat (University of Florida)

3:50 PM Application of the Dynamic Control Rod Reactivity Measurement Method to Korea Standard Nuclear Power Plants, Eun-ki Lee, Il-tak Woo, Ho-chul Shin, Suk-Jin Ryu, Sung-Man Bae, Yong-Kwan Lee (Korea Electric Power Research Institute - KEPRI)

4:10 PM Physics Study on Direct Use of U-ZrH1.6 Fuel in PWR, Zeev Shayer (University of Denver)

4:30 PM CANDU Adjuster Rods Incremental Cross Sections Evaluation: A Perturbative Approach, Guy Marleau (Ecole Polytechnique de Montreal)

**Session 3B Research Reactors** ***Columbus G***

Session Organizers: Nelson Hanan (ANL), Hamid Ait Abderrahim (SCK-CEN). Session Chairs: Nelson Hanan (ANL).

2:30 PM Modeling the MIT Reactor Neutronics for LEU Conversion Studies, Thomas H. Newton Jr., Zhiwen Xu, Edward E. Pilat, Mujid Kazimi (Massachusetts Institute of Technology)

2:50 PM A New De-homogenisation Method for Local Power Reconstruction, Guy Pierre Willermoz, David Blanchet, Jacques Di-Salvo, Christoph Doderlein, Nicolas Huot (CEA)

3:10 PM Safety Assessment of Reducing the Tantalum Content of High Flux Isotope Reactor Regulating and Safety Elements, Trent Primm (ORNL)

3:30 PM Automated Three Dimensional Depletion Capability for the Pennsylvania State University Research Reactor, Chanatip Tippayakul, Kostadin Ivanov (Pennsylvania State University)

3:50 PM HOR: Criticality Comparison Using a Nodal Code, Monte Carlo Codes and Plant Data, P.F.A. de Leege (Delft University of Technology)

4:10 PM The Application of the Zr to the Thermal Neutron Fluence Monitoring at the Irradiation Experiments of the Research Reactor, Myong Seop Kim, Sang Jun Park, Byung Chul Lee, Heonil Kim, Byung Jin Jun (Korea Atomic Energy Research Institute)

4:30 PM Determination of the Linear Power in MOX Fuel Rods Irradiated at BR2, Edgar Koonen, (SCK-CEN (Belgian Nuclear Research Center))

**Session 3C Fuel Cycle Physics** ***Columbus H***

Session Organizers: Alain Zaetta (CEA Cadarache), Michael Todosow (BNL). Session Chairs: Michael Todosow (BNL), Alain Zaetta (CEA Cadarache).

2:30 PM The Physics of TRU Transmutation -- A Systematic Approach to the Intercomparison of Systems, Massimo Salvatores (CEA & ANL), Robert N. Hill (ANL), Igor Slessarev, Gilles Youinou (CEA Cadarache)

2:50 PM Dynamic Analysis of the AFCI Scenarios, Abdellatif M. Yacout, Robert N. Hill, Luc Van Den Durpel, Phillip J. Finck (ANL), Erich Schneider, Charles G. Bathke (LANL), J. S. Herring (INEEL)

3:10 PM Uncertainty Analysis on Back-end Fuel Cycle Main Parameters, Giovanni B. Bruna and Bertrand Carlier (FRAMATOME-ANP), Enrico Padovani and Alberto Michelotti (POLITECNICO di MILANO)

3:30 PM Effectiveness of Different Burnable Poisons in a Long Cycle BWR, Yuichiro Inoue, Zhiwen Xu, Edward E. Pilat (Massachusetts Institute of Technology)

3:50 PM Studies of Advanced Fuel Cycles in Indian PHWRs and AHWR, P. D. Krishnani, R. Srivenkatesan, Baltej Singh, Umasankari Kannan, Arvind Kumar, Sadhana Mukerji (Bhabha Atomic Research Center)

4:10 PM Influence of Nuclear Fuel Cycle Duration and Reprocessing Losses Level on the Nuclear Power System Structure, Stanislav A. Subbotin, Pavel N. Alekseev, Anatoly A. Dudnikov (Russian Research Center Kurchatov Institute)

4:30 PM Assessment of Reduced Moderation Water Reactor Fuel Cycle, Taek Kyum Kim, Won Sik Yang, Temitope A. Taiwo, Robert N. Hill (ANL)

**Session 3D Criticality Benchmarks** ***Grand A***

Session Organizers: Russell D. Mosteller (LANL), Robert Jacqmin (CEA Cadarache), Hironobu Unesaki (Kyoto University).
Session Chairs: Richard D. McKnight (ANL), Hironobu Unesaki (Kyoto University).

2:30 PM TransLAT Lattice Physics Code Benchmark to the B&W Gadolinia Criticals, Steven Baker (TransWare Enterprises Inc.)

2:50 PM ENDF/B-V and ENDF/B-VI Calculations for the LWBR SB Core Benchmarks with MCNP5, Russell D. Mosteller (LANL)

3:10 PM Benchmark Comparisons of Deterministic and Monte Carlo Codes for a PWR Heterogeneous Assembly Design, Taek K. Kim, John Stillman, Temitope A. Taiwo (ANL), Christine Chabert, Laurence Mandard (CEA)

3:30 PM Analysis of the Experimental Program MISTRAL Using CASMO-4, Akiko Kanda, Tetsuo Nakajima, Kyoko Sano (Japan Nuclear Energy Safety Organization)

3:50 PM Solution of the C5G7 3-D Extension Benchmark by the SN Code TORT, Armin Seubert, Winfried Zwermann, Siegfried Langenbuch (Gesellschaft für Anlagen- und Reaktorsicherheit (GRS) mbH)

4:10 PM Solutions to the New C5G7MOX Three-Dimensional Transport Benchmarks Using the TORT Code, Jesse Klingensmith, Yousry Youssef Azmy (Pennsylvania State University), Jess Gehin (ORNL), Roberto Orsi (ENEA FIS-NUC)

4:30 PM Creation of a Simplified Benchmark Model for the Neptunium Sphere Experiment, Russell D. Mosteller, David J. Loaiza, Rene G. Sanchez (LANL)

## Tuesday, April 27, 2004, 5:00 P.M.

**Session 4A Poster Session and Reception** ***Crystal Ballroom Foyer***

Monte-Carlo Techniques to Simulate Pebble Dislocations in a PB-MR during Depletion, Nunzio Burgio (ENEA - CRE Casaccia), Giovanni Bruna (Framatome), Alfonso Santagata (ENEA - CRE Casaccia), Rocco Labella, Engineer (FRAMATOME-ANP), Jessica Beati, Augusto Gandini (University of Rome La Sapienza)

Design of Pebble-Bed Reactors Using a Genetic Algorithm, Hans D. Gougar, Abderrafi M. Ougouag, William K. Terry (INEEL), Kostadin Ivanov (Pennsylvania State University)

Feasibility of Using Burnable Poisons for Reduction of Coolant Void Reactivity in LMR for TRU Transmutation, Yong Nam Kim, Jong Kyung Kim (Hanyang University), Won Seok Park (Korea Atomic Energy Research Institute)

Plutonium Disposition in the PBMR-400 High-Temperature Gas-Cooled Reactor, Eben J. Mulder (PBMR (Pty) Ltd)

Definition of a Calculation Scheme with MONTEBURNS for Decay Heat Calculations of HTR Fuel, Anne De L'hermite (FRAMATOME-ANP)

Concept of a Gas Cooled Fast Reactor, N. Kuzavkov, Yu. Sukharev, S. Usynia (OKB Mechanical Engineering)

MINERVE Reactor Characterization in Support of the OSMOSE Program: Safety Parameters, Jean-Pascal Hudelot (CEA Cadarache), Raymond Klann, Bradley Micklich (ANL), Muriel Antony, Pierre Leconte, Jean-Michel Girard, Valerie Laval (CEA - Cadarache), Gregory Perret (CEA)

Thermo Mechanical Calculations for Integrated High Fidelity Reactor Core Simulations, Tanju Sofu (ANL)

Monte Carlo Midway Forward-Adjoint Coupling with Legendre Polynomials for Borehole Logging Applications, David Legrady, J. Eduard Hoogenboom (Delft University of Technology)

Visualization of Space-Dependency of Responses of Monte Carlo Calculations Using Legendre Polynomials, J. Eduard Hoogenboom, David Legrady (Delft University of Technology)



An Influence of Core Physics Peculiarities upon the Thermal Hydraulics Performance in Cascade Subcritical Molten Salt Reactor, Vladimir A. Nevinitsa, Pavel N. Alekseev, Aleksey A. Sedov, Peter A. Fomichenko, Alexander V. Vasiliev, Elyaz M. Aisen (Russian Research Center Kurchatov Institute), Andrey M. Voloshchenko (Keldysh Institute of Applied Mathematics)

AGENT Code: Open-Architecture Analysis and Configuration of Research Reactors – Graphic Tools, Tatjana Jevremovic, Dimitrios Andristos (Purdue University)

DELPHI:A New Subcritical Assembly at Delft University of Technology, Jan Leen Kloosterman (Delft University of Technology)

The Studies of RBMK-1500 Reactor Core Behavior during Abnormal Operation Transients, Arvydas Adomavicius, Anton Belousov, Jonas Gylys, Viktor Ognerubov, Stanislovas Ziedelis (Kaunas University of Technology), Audrius Jasiulevicius, Andrej Kubarev (Royal Institute of Technology)

Radiation Shielding Estimates for Interplanetary Manned Missions, Aaron Totemeier, Tatjana Jevremovic, Derek Hounshel, Sean Duckett (Purdue University)

Reduction of Cross-Section-Induced Errors of the BN-600 Hybrid Core Nuclear Parameters by Using BFS-62 Critical Experiment Data, Akira Shono, Taira Hazama, Makoto Ishikawa (Japan Nuclear Cycle Development Institute), Gennadi Manturov (Institute of Physics & Power Engineering)

Uncertainty Analysis Results on BN-600 Hybrid Core Nuclear Physics Characteristics, Gennadi Manturov, Mikhail Semenov, Anatoly Seregin, Anatoly Tsiboulya (Institute of Physics and Power Engineering - IPPE), Taira Hazama (Japan Nuclear Cycle Development Institute)

Analysis of SNEAK-7A & 7B Critical Benchmarks using3-D Deterministic Transport and Sensitivity, Sang Kiim (KAERI), Ivo Kodeli, Enrico Sartori (OECD Nuclear Energy Agency)

Derivation of the Space and Energy Dependent Formula for the Third Order Neutron Correlation Technique, Tomohiro Endo, Yasunori Kitamura, Akio Yamamoto, Yoshihiro Yamane (Nagoya University)

Cross-Section Generation for TRADE Fuel, Ron Dagan, Cornelis H. M. Broeders, Madelena Badea, Anton Travleev (Forschungzentrum Karlsruhe(FZK))

On-line Determination of the Prompt Fraction of In-Core Neutron Detectors in CANDU Reactors, Christophe Demazière, Imre Pazsit (Chalmers University of Technology), Oszvald Glockler (Ontario Power Generation)

Dynamics of a Reduced Order Model of Natural Circulation BWR, Quan Zhou, Rizwan Uddin (University of Illinois at Urbana-Champaign)

Solution of the 1D Kinetic Diffusion Equations Using a Reduced Nodal Cubic Scheme, Edmundo Del Valle (Instituto Politecnico Nacional), Armando Gomez, Gustavo Alonso, Arturo Delfin (Instituto Nacional de Investigaciones Nucleares)

CANDU Reactor Simulations with a Full P1 Method, Jean Koclas (École Polytechnique de Montréal), Benoit Forget (Georgia Institute of Technology)

The Simplified Even-Parity SN Equations Applied to a MOX Fuel Assembly Benchmark Problem on Distributed Memory Environments, Gianluca Longoni, Alireza Haghighat (University of Florida)

On the Influence of Differences Between Various Group Microconstant Libraries and Between Different Transport Options on Calculation Results for Cells and Subassemblies of VVER-1000 Reactor, Nickolay Ilyich Laletin, Nikolay Sultanov Sr., Aleksey Kovalishin Sr. (RRC Kurchatov Institute)

Sipping Tests on a Failed Irradiated MTR Fuel Element, Carlos Alberto Zeituni, Luis Antonio Albiac Terremoto, José Eduardo Rosa Da Silva (Instituto de Pesquisas Energéticas e Nucleares)

## Tuesday, April 27, 2004, 7:00 P.M.

**Banquet** ***Crystal Ballroom***

Alan Waltar (Pacific Northwest National Laboratory)

## Wednesday, April 28, 2004, 8:30 A.M.

**Session 5A Fuel/Core Design and Analysis** ***Columbus EF***

Session Organizers: Kord Smith (Studsvik-Scandpower). Session Chairs: Richard J. Cacciapouti (AREVA).

8:30 AM New Computational Methodology for Large 3D Neutron Transport Problems, Mohamed Dahmani, Robert Roy, Jean Koclas (École Polytechnique de Montréal)

8:50 AM Spent Nuclear Fuel Analyses Based on In-Core Fuel Management Calculations, Sigurd Borresen (Studsvik Scandpower)

9:10 AM ALAADIN/FLS - A BWR Fast Lattice Design Simulation Tool, Albert G. Gu, Robert J. Veklotz, Hoju Moon, Ralph G. Grummer, Craig Brown (Framatome ANP)

9:30 AM The Feasibility Study of the Minimum-Shuffling Reloading Strategy for PWR, Masato Tabuchi (Nagoya University), Yasushi Hanayama, Masatoshi Yamasaki (Nuclear Fuel Industries, Ltd.), Akio Yamamoto (Nagoya University)

9:50 AM Probability Approaching Method (PAM) and Its Application on Fuel Management Optimization, Zhihong Liu (Tsinghua University)

10:10 AM *Break*

10:30 AM High Fuel Burn-up and Nonproliferation in PWR-type Reactor on the Basis of Modified U- and Th-fuels, Gennady Genrikhovich Kulikov (International Science and Technology Center), Anatoly Nikolaevich Shmelev, Vladimir Alexandrovich Apse (Moscow Engineering Physics Institute)

10:50 AM Over-Moderated MOX Fuel Assembly in a BWR Mixed Reload, Jose Ramon Ramirez-Sanchez (Instituto Nacional de Investigaciones Nucleares)

11:10 AM Performance Comparison of Different Absorbent Materials in BWR Control Rods, José Luis Montes Tadeo (Mexican Nuclear Research Institute)

11:30 AM Enriched Gadolinium as Burnable Absorber for PWR, Klaes-Håkan Bejmer (Vattenfall Bränsle AB, Sweden), Ola Seveborn (Uppsala University)

**Session 5B Gas-Cooled Reactors** ***Columbus G***

Session Organizers: Alan Baxter (General Atomics). Session Chairs: Alan Baxter (General Atomics).

8:30 AM The Pebble Bed Modular Reactor Layout and Neutronics Design of the Equilibrium Cycle, Frederik Reitsma (PBMR Pty Ltd)

8:50 AM Neutronic Modeling for a Gas-Cooled Fast Reactor Assuming Coated Fuel Particles, Hervé Golfier, Laurent Buiron, Christine Poinot, Baptiste Pothet, Jean-François Salavy, Etienne Studer (CEA)

9:10 AM Methodology for a Large Gas-Cooled Fast Reactor Core Design and Associated Neutronic Uncertainties, Jean-Christophe Bosq, Alain Conti, Gerald Rimpault, Garnier Jean-Claude (CEA)

9:30 AM Optimal Moderation in the Pebble-Bed Reactor for Enhanced Passive Safety and Improved Fuel Utilization, Abderrafi M. Ougouag, Hans D. Gougar, William K. Terry (Idaho National Engineering and Environmental Laboratory), Ramatsemela Mphahlele, Kostadin Ivanov (Pennsylvania State University)

9:50 AM Fuel Design and Core Layout for a Gas Cooled Fast Reactor, Wilfred Van Rooijen (Delft University of Technology - Interfaculty Reactor Institute), Jan Leen Kloosterman, Tim Van Der Hagen, Hugo Van Dam (Delft University of Technology)

10:10 AM *Break*

10:30 AM GT-MHR Core Modelling: From Reference Modelling Definition in Monte-Carlo Code to Calculation Scheme Validation, Frederic Damian, Xavier Raepsaet, Simone Santandrea, Alain Mazzolo, Christine Poinot (CEA - Saclay),Jean-Christophe Klein (CEA - Cadarache), Leandre Brault, Christian Garat (Framatome - ANP)

10:50 AM Modeling of HTRs with Monte Carlo: Sensitivity due to Different Isotopic Fuel Composition, Danas Ridikas (CEA Saclay)

11:10 AM Low-Conversion Ratio Gas-Cooled Fast Reactors, Edward A. Hoffman, Temitope A. Taiwo, Robert N. Hill (ANL)

11:30 AM Possibility to Use Different Fuel Cycles in GT-MHR, N. Kodochigov, Yu. Sukharev, E. Marova (OKB Mechanical Engineering), N. Ponomarev-Stepnov, E. Glushkov, P. Fomichenko (RRC Kurchatov Institute)

**Session 5C Critical and Subcritical Experiments** ***Columbus H***

Session Organizers: Russell D. Mosteller (LANL), Robert Jacqmin (CEA Cadarache), Hironobu Unesaki (Kyoto University).
Session Chairs: Russell D. Mosteller (LANL).

8:30 AM Criticality Analysis of Highly Enriched Uranium / Thorium Fueled Thermal Spectrum Cores of Kyoto University Critical Assembly, Hironobu Unesaki, Tsuyoshi Misawa, Chihiro Ichihara, Keiji Kobayashi, Hiroshi Nakamura, Seiji Shiroya (Kyoto University) , Kazuhiko Kudo (Kyushu University)

8:50 AM Analysis of Criticality Change with Time for MOX Cores, Ken Nakajima (Kyoto University), Takenori Suzaki (Japan Atomic Energy Research Institute)

9:10 AM Subcritical Experiments in Uranium-Fueled Core with Central Test Zone of Tungsten, Tsuyoshi Yamane, Shigeaki Okajima (Japan Atomic Energy Research Institute)



9:30 AM Re-Evaluation of SEFOR Doppler Experiments and Analyses with JNC and ERANOS systems, Taira Hazama (Japan Nuclear Cycle Development Institute), Jean Tommasi (CEA)

9:50 AM The TRADE Source Multiplication Experiments, George Imel, Dmitri G. Naberejnev, Giuseppe Palmiotti (ANL), Laurence Mandard, Gilbert Granget (CEA), M. Carta (ENEA)

10:10 AM *Break*

10:30 AM Study of the Influence of a Pulsed Source in the Kinetics Measurements in a Subcritical System, Yolanda Rugama (CEA), George Imel (ANL)

10:50 AM The MUSE Pulsed Neutron Source experiments, Enrique M. Gonzalez-romero (Centro de Estudios Energéticos Medioambientales y Tecnológicos)

11:10 AM Reactivity Measurements and Neutron Spectrometry in the MUSE-4 Experiment, Annick Billebaud, Joachim Vollaire, Roger Brissot, Daniel Heuer, Christian Le Brun, Eric Liatard, Jean-marie Loiseaux, Olivier Meplan, Elsa Merle-Lucotte, Alexis Nuttin, Fabien Perdu (CNRS), Cristophe Destouches, Pascal Chaussonnet, Jean-Marc Laurens, Yolanda Rugama (CEA)

11:30 AM Some Experimental Results from the Last Phases of the MUSE Program, Frederic Mellier (CEA), George Imel (ANL), Yolanda Rugama (Technological University of Delft), Christian Jammes (CEA), Jean-françois Lebrat (CEA)

**Session 5D Reactor Analysis Methods** ***Wrigley***

Session Organizers: Giuseppe Palmiotti (ANL), Giovanni Bruna (Framatome ANP), Jasmina Vujic (UC Berkley). Session Chairs: Elmer Lewis (Northwestern University).

8:30 AM Reactor Core Simulations in Canada, Robert Roy, Jean Koclas (École Polytechnique de Montréal), Wei Shen, Dave Jenkins, Dimitar Altiparmakov, Benjamin Rouben (Atomic Energy of Canada Limited)

8:50 AM A New Method for the Treatment of Strong Local Heterogeneities and Its Application to the PHEBUS Experimental Facility, Ruggieri, Jean-Michel, Girardi Enrico (CEA)

9:10 AM Mixed-Hybrid Methods for the Linear Transport Equation, Serge Van Criekingen, Elmer E. Lewis (Northwestern University)

9:30 AM Adaptative Solution of the Multigroup Diffusion Equation on Irregular Structured Grids Using a Non Conforming Finite Element Method Formulation, Jean C. Ragusa (CEA)

9:50 AM The Variational Nodal Method in R-Z Geometry, Hui Zhang (Northwestern University), Elmer E. Lewis (Northwestern University)

10:10 AM *Break*

10:30 AM Solving the Neutron Diffusion Equation on Combinatorial Geometry Computational Cells for Reactor Physics Calculations, Yousry Youssef Azmy, Professor (Pennsylvania State University)

10:50 AM Development of Hybrid Core Calculation System Using 2-D Full-Core Heterogeneous Transport Calculation and 3-D Advanced Nodal Calculation, Masaaki Mori (Nuclear Engineering, Limited)

11:10 AM A First-Order Spherical Harmonics Formulation Compatible with the Variational Nodal Transport Method, Micheal A. Smith, Giuseppe Palmiotti, Won Sik Yang (ANL), Elmer E. Lewis (Northwestern University)

11:30 AM Investigating the Use of 3-D Deterministic Transport for Core Safety Analysis, Hans D. Gougar, Manager, D. Scott Lucas, Paul A. Roth (INEEL), Todd A. Wareing, Greg Failla, John McGhee (Radion Technologies)

## Wednesday, April 28, 2004, 12:00 P.M.

**Luncheon** ***Columbus IJKL***

*Emerging Areas in Reactor Physics,* Cecil Parks (Oak Ridge National Laboratory)

## Wednesday, April 28, 2004, 1:30 P.M.

**Session 6A Advanced Reactor Designs** ***Columbus EF***

Session Organizers: Bojan Petrovic (Westinghouse), Mario Carelli (Westinghouse), Marc Delpech (CEA). Session Chairs: Mario Carelli (Westinghouse), Bojan Petrovic (Westinghouse).

1:30 PM Feasibility Issues in the Mixed Spectrum Supercritical Water Reactor, Taek K. Kim (ANL), Paul Wilson, Po Hu, Rachna Jain (University of Wisconsin-Madison)

1:50 PM Reduced Moderation BWR with Advanced Recycle System (BARS), Kouji Hiraiwa, Kenichi Yoshioka, Yasushi Yamamoto, Miyuki Akiba, Mitsuaki Yamaoka (Toshiba), Junji Mimatsu (Gifu University)

2:10 PM A Core Design for a Single Fuel Enrichment in a Self-Sustaining Lead-Cooled Reactor, Yonghee Kim, Choong Ho Cho, Sang Ji Kim, Tae Yung Song (Korea Atomic Energy Research Institute)

2:30 PM Neutronics Design Studies of a Lead Cooled, Small Modular Reactor, Micheal A. Smith, Won Sik Yang, Temitope A. Taiwo (ANL)

2:50 PM Physics and Safety Studies of a 0.25 Conversion Ratio Sodium Cooled Fast Reactor, Micheal A. Smith, James E. Cahalan, Robert N. Hill (ANL)

3:10 PM *Break*

3:30 PM Neutronics Design Studies for a 400 MWt STAR-LM, Gerardo Aliberti, Won Sik Yang, John Stillman, Robert N. Hill (ANL)

3:50 PM PDS-XADS LBE and Gas-Cooled Concepts: Neutronic Parameters Comparison, Sandro Pelloni (Paul Scherrer Institut)

4:10 PM Study of Accelerator Transient on ADS Operation Using TRACY(TRAnsient experiment Critical facilitY), Satoshi Gunji (Tohoku University)

4:30 PM Activities of Working Party on 'Subcritical Core of Accelerator-Driven System' in the Research Committee on Reactor Physics of AESJ and JAERI, Tomohiko Iwasaki (Tohoku University)

**Session 6B Nuclear Safety** ***Columbus G***

Session Organizers: Kostadin N. Ivanov (Pennsylvania State University), Werner Maschek (Karlsruhe). Session Chairs: David Diamond (BNL), Siegfried Langenbuch (GRS), Eric Royer (CEA).

1:30 PM Effect of Spatial Power Distribution during Reactivity Initiated Accidents in a PWR, Alexander Avvakumov, Valery Malofeev, Victor Sidorov (Russian Research Centre)

1:50 PM Analysis of Boron Dilution Transients in PWRs, David Diamond, Blair Bromley, Arnold Aronson (BNL)

2:10 PM Uncertainty Evaluation of the Results of the MSLB Benchmark by CIAU Methodology, Alessandro Petruzzi (Pennsylvania State University), Francesco S. D'auria (University of Pisa), Kostadin Ivanov (Pennsylvania State University)

2:30 PM Improving the Computation Efficiency of COBRA-TF for LWR Safety Analysis of Large Problems, Diana Cuervo (Polytechnic University of Madrid), Maria Nikolova Avramova, Graduate Student (Pennsylvania State University), Kostadin Ivanov, Associate Professor (Pennsylvania State University)

2:50 PM POLCA-T Simulation of OECD/NRC BWR Turbine Trip Benchmark Exercise 3 Best Estimate Scenario TT2 Test and Four Extreme Scenarios, Dobromir Panayotov (Westinghouse Atom AB)

3:10 PM *Break*

3:30 PM Localized Void Feedback Effects Under Single Rod Drop Transient in BWR, Akitoshi Hotta, Hiroshi Shirai (TEPCO Systems Corporation)

3:50 PM Peach Bottom-2 Low-Flow Stability Test using Trac-Bf1/Valkin and Relap5-Mod.3.3/Parcs Codes, Rafael Miró, Ana María Sánchez, Gumersindo Verdu Martin, Damian Ginestar (Universitat Politecnica de Valencia), Francesca Maggini, Francesco D'auria (Università di Pisa)

4:10 PM Bruce 'B' Core Conversion, Evgeny Braverman, Ovidiu Nainer (Bruce Power)

4:30 PM Coupled Neutronics-Thermalhydraulics Calculations for the Safety Analysis of the PBMR., Bismark Mzubanzi Tyobeka, Kostadin Ivanov (Pennsylvania State University)

**Session 6C Physics Code Validation** ***Columbus H***

Session Organizers: Alain Santamarina (CEA Cadarache), Robert Jacqmin (CEA Cadarache), Richard Sanchez (CEA). Session Chairs: Alain Santamarina (CEA Cadarache).

1:30 PM Experimental Validation of APOLLO2 Code for High Burnup MOx Fuels. JEF2.2 Results and JEFF3.0 Improvements, Bernard David (CEA Cadarache)

1:50 PM Assessment of CASMO-4 Predictions of the Isotopic Inventory of High Burn-up MOX Fuel, Rafael Macian, Martin A. Zimmermann, Rakesh Chawla (Paul Scherrer Institut)

2:10 PM PANDA Code Features and Application to the OECD/NEA 3D-MOX Assembly Benchmark Calculation, Philippe P. Humbert (CEA)

2:30 PM Benchmarking DeCART (Deterministic Core Analysis based on Ray Tracing) with the VENUS-2, Zhaopeng Zhong, Thomas J. Downar (Purdue University)



2:50 PM Monte Carlo Analysis of High Moderation 100% MOX BWR Cores using JEF2 and JENDL3 Nuclear Data, Olivier Litaize, Alain Santamarina (CEA)

3:10 PM *Break*

3:30 PM Experimental Validation of Pin Power Distributions for a BWR Assembly with Hafnium Control Blades, Fabian Jatuff (Paul Scherrer Institut)

3:50 PM Validation of Integrated Burnup Code System SWAT2 by the Analysis of Isotopic Composition Data of Spent Nuclear Fuel, Kenya Suyama (JAERI), Hiroki Mochizuki (The Japan Research Institute Limited), Hiroshi Okuno, Yoshinori Miyoshi (JAERI)

4:10 PM Verification of Lattice Analysis Method through BWR UO2 PIE Data Analysis, Toru Yamamoto (Japan Nuclear Energy Safety Organization)

4:30 PM Uncertainty Analysis Applied to Fuel Depletion Calculations, Rafael Macian, Martin A. Zimmermann, Rakesh Chawla (Paul Scherrer Institut)

**Session 6D Reactor Analysis Methods** ***Wrigley***

Session Organizers: Giuseppe Palmiotti (ANL), Giovanni Bruna (Framatome ANP), Jasmina Vujic (UC Berkley). Session Chairs: Won Sik Yang (ANL).

1:30 PM Neutronics Codes Currently Used in Japan for Fast and Thermal Reactor Applications, Toshikazu Takeda (Osaka University)

1:50 PM HORUS3D Code Package Development and Validation for the JHR Modeling, Guy Pierre Willermoz, Alain Aggery, Jacques Di-salvo, Christoph Doderlein, Danielle Gallo, Nicolas Huot, Stéphane Loubière, Brigitte Noël (CEA)

2:10 PM On Some Features of Quasi-Static Schemes in Reactor Kinetics, Piero Ravetto, Sandra Dulla (Politecnico Di Torino), Matteo M. Rostagno (ENEA-Bologna)

2:30 PM Albedo Conditions for Multigroup Anisotropic Scattering Models of Nuclear Reactors, Marcos P. De Abreu (State University of Rio de Janeiro)

2:50 PM An Algebraic Multgrid Resolution Strategy for the DPn Synthetic Acceleration Method, Simone Santandrea (CEA)

3:10 PM *Break*

3:30 PM Convergence Analysis of 2-D/1-D Coupling Strategies for Diffusion Equation, Hyun Chul Lee, Deokjung Lee, Thomas J. Downar (Purdue University)

3:50 PM Numerical Convergence Analysis of the Nonlinear CMFD Method for Three-Dimensional Two-Group LWR Diffusion Problems, Deokjung Lee, Thomas J Downar (Purdue University), Yonghee Kim (Korea Atomic Energy Research Institute)

4:10 PM An Approach of Super-Element Sweeping for the Solution of Neutron Transport Equation in Heterogeneous Geometry, Nam Cho, Gil Soo Lee (KAIST)

4:30 PM Efficient Hybrid NEM/BEM Transient Method, Dianna M. Hahn, Kostadin Ivanov (Pennsylvania State University), Piero Ravetto (Politecnico Di Torino), Matteo Rostagno (ENEA-Bologna)

## Thursday, April 29, 2004, 8:30 A.M.

**Plenary Session - Efforts in Code Development and Reactor Modeling** ***Regency A***

*Neutronics Codes Currently Used in Japan for Fast and Thermal Reactor Applications*, Toshikazu Takeda (Osaka University)

*Monte-Carlo Methods and MCNP Code Developments*, Forrest Brown (Los Alamos National Laboratory)

## Thursday, April 29, 2004, 10:00 A.M.

**Session 7A Non-Conventional Reactors** ***Columbus EF***

Session Organizers: Jan Leen Kloosterman (Delft University of Technology). Session Chairs: Danny Lathouwers (Interfaculty Reactor Institute).

10:00 AM Simulations of Caliban Fast Pulsed Reactor Burst Wait Time Distribution using PANDA, Philippe P. Humbert, Boukhmes Mechitoua (CEA)



10:20 AM Passive Decay Heat Removal in a Fluidized Bed Nuclear Reactor, Alexander Agung (Delft University of Technology), Danny Lathouwers (Interfaculty Reactor Institute), Tim Van Der Hagen, Hugo Van Dam (Delft University of Technology), Chris Pain, Anthony J. Goddard (Imperial College)

10:40 AM Molten Salt Reactors and Possible Scenarios for Future Nuclear Power Deployment, Elsa Merle-Lucotte, Daniel Heuer, Ludovic Mathieu, Jean-Marie Loiseaux, Annick Billebaud, Roger Brissot, Christian Le Brun, Olivier Laulan, Eric Liatard, Olivier Meplan, Alexis Nuttin, Sylvain David, Franco Michel-Sendis (Centre National de la Recherche Scientifique)

11:00 AM Closing the PWR Fuel Cycle with a Molten-Salt Incinerator, Radim Vocka (Nuclear Research Institute Rez plc.)

11:20 AM Monte Carlo Calculation of the Effects of Delayed Neutron Precursor Transport in Molten Salt Reactors, P.F.A. de Leege (Delft University of Technology)

11:40 AM Studies of Physical Features of Cascade Subcritical Molten Salt Reactor with External Neutron Source, Vladimir A. Nevinitsa, Pavel N. Alekseev, Peter A. Fomichenko, Alexander V. Vasiliev, Anatoly A. Dudnikov, Aleksey A. Sedov, Stanislav A. Subbotin (Russian Research Center Kurchatov Institute), Andrey M. Voloshchenko (Keldysh Institute of Applied Mathematics)

**Session 7B Nuclear Data** ***Columbus G***

Session Organizers: Luiz Leal (ORNL), Mark Chadwick (LANL). Session Chairs: Russell Mosteller (LANL), Alain Santamarina (CEA Cadarache).

10:00 AM New Neutron Cross Section Measurements at ORELA for Improved Nuclear Data, Klaus H. Guber, Luiz C. Leal, Royce O. Sayer, Paul E. Koehler (ORNL)

10:20 AM Measurement and Calculation of the 233Pa Fission Cross-Section for Advanced Fuel Cycles, Franz-Josef Hambsch, Stephan Oberstedt, Volker Fritsch (EC-JRC-IRMM), Fredrik Tovesson, Andreas Oberstedt, M Fleneus, C. Gustafsson (Oerebro University), Birger Fogelberg, Elisabet Ramstroem (Uppsala University), Georghita Vladuca, Anabella Tudora, D. Filipescu (Bucharest University)

10:40 AM Scattering Law Data for Graphite in Gas Cooled High Temperature Reactors, Wolfgang Bernnat, Margarete Mattes, Juergen Keinert, Dr. (University of Stuttgart)

11:00 AM An Unresolved Resonance Evaluation for U-235, Luiz Leal (Oak Ridge National Laboratory)

11:20 AM Status of a New Evaluation of the Neutron Resonance
Parameters of 238U at ORNL, Herve Derrien (ORNL)

11:40 AM JEF2.2 nuclear data statistical adjustment using Post-Irradiation Experiments, Arnaud Courcelle, Alain Santamarina (CEA)

**Session 7C Nuclear Safety** ***Columbus H***

Session Organizers: Kostadin N. Ivanov (Pennsylvania State University), Werner Maschek (Karlsruhe). Session Chairs: Akitoshi Hotta (TEPCO Systems Corporation), Dobromir Panayotov (Westinghouse Atom AB).

10:00 AM OECD/DOE/CEA VVER-1000 Coolant Transient (V1000CT) Benchmark for Assessing Coupled Neutronics/Thermal-Hydraulics System Codes for VVER-1000 RIA Analysis, Boyan D Ivanov, Kostadin N Ivanov (Pennsylvania State University), Eric Denis Royer, Sylvie Aniel (CEA), Nikola Kolev, Pavlin Groudev (INRNE)

10:20 AM Uncertainty and Sensitivity Analysis Applied to Coupled Code Calculations for a VVER Plant Transient, Siegfried Langenbuch (Gesellschaft für Anlagen- und Reaktorsicherheit (GRS) mbH)

10:40 AM Study of Nuclear Fuel Behavior with Coupled 3D Neutronics/Thermal-Hydraulic Codes, Carlo Parisi (University of Pisa), Kostadin Ivanov (Pennsylvania State University), Francesco S. D'auria (University of Pisa)

11:00 AM TRAC-M/AAA Code Assessment for Transient Analysis of Pb-Bi Cooled Fast-Spectrum Reactor Systems, Konstantin Mikityuk, Paul Coddington, Rakesh Chawla (Paul Scherrer Institut)

11:20 AM Source and Reactivity Perturbations in Accelerator Driven Systems with Conventional MOX and Advanced Fertile Free Fuel, Xue-nong Chen, Tohru Suzuki, Andrei Rineiski, Claudia Matzerath Boccaccini, Werner Maschek (Forschungszentrum Karlsruhe), Peter Smith (Serco Assurance)

11:40 AM Safety Characteristics of Candidate Oxide Fuels for Accelerator Driven Transmuters, Tim Newton, Peter Smith (Serco Assurance)

**Session 7D Physics and Modeling of Research Reactors in INIE's Big-10 Consortium** ***Columbus IJ***

Session Organizers: Yousry Azmy (Pennsylvania State University), Rizwan Uddin (University of Illinois at Urbana-Champaign). Session Chairs: Yousry Azmy (Pennsylvania State University), Rizwan Uddin (University of Illinois at Urbana-Champaign).

10:00 AM Beam Calculation for TRIGA Reactor, Rizwan Uddin (University of Illinois at Urbana-Champaign)

10:20 AM Thermal Neutron Time-of-Flight Spectroscopy at Penn State using a Single-Disk Chopper, John Niederhaus (University of Wisconsin-Madison), Jack Brenizer, Kenan Unlu (Pennsylvania State University)

10:40 AM UIUC's Contribution to Big-10's INIE Project, Rizwan Uddin (University of Illinois at Urbana-Champaign), Nick Karancevic (University of Illinois)

11:00 AM Modeling of Existing Beam-Port Facility at PSU Breazeale Reactor by Using MCNP, Baris Sarikaya, Fatih Alim, Kostadin N. Ivanov, Kenan Unlu, Jack Brenizer, Yousry Azmy (Pennsylvania State University)

11:20 AM AGENT Code: Open-Architecture Analysis and Configuration of Research Reactors – Numerical Examples, Tatjana Jevremovic, Yefei Peng, Hyun Lee (Purdue University)

11:40 AM A Three Dimensional Two Energy Group Coupled Reactor Physics and Thermal Hydraulics Code (M32) - A Tool for Student Design Studies, James Brushwood, Philip A. Beeley (University of Surrey)

## Thursday, April 29, 2004, 1:00 P.M.

**Session 8A Fuel Cycle Physics** ***Columbus EF***

Session Organizers: Alain Zaetta (CEA Cadarache), Michael Todosow (BNL). Session Chairs: Michael Todosow (BNL), Alain Zaetta (CEA Cadarache).

1:00 PM A Study on High-Intensity Radiation Protection of MOX-Fuel Doped with 231Pa and 137Cs, Eduard Kryuchkov (Moscow Engineering Physics Institute (State University))

1:20 PM Optimization Studies for Seed-and-Blanket Unit (SBU) Fuel Assemblies in PWRs, Blair P. Bromley, Michael Todosow, Arnold Aronson (BNL), Alex Galperin (Ben-Gurion University of the Negev)

1:40 PM Reactivity and Neutron Emission Measurements of Burnt PWR Fuel Rod Samples in LWR-PROTEUS Phase II, Michael F. Murphy, Fabian Jatuff (Paul Scherrer Institut)

2:00 PM LWR Spent Fuel Fed Molten Salt Reactor Design and Analysis, Massimiliano Fratoni, Ehud Greenspan, David Barnes (University of California, Berkeley), Augusto Gandini (University of Rome)

2:20 PM On the Capability of SMORES to Account for Self-Shielding in Search for Maximum keff, Ehud Greenspan, Yonathan - Karni (University of California)

2:20 PM Concept for a Thermal-Hydraulic 3D Parallel Channel Core Model, Alois Hoeld (Private (Retired))

2:40 PM Reactivity Effects due to the Beryllium Poisoning of BR2 - MCNP Calculations, Silva Kalcheva, Bernard Ponsard, Edgar Koonen (SCK-CEN (Belgian Nuclear Research Center))

**Session 8B Nuclear Data** ***Columbus G***

Session Organizers: Luiz Leal (ORNL), Mark Chadwick (LANL). Session Chairs: Michael Dunn (ORNL), Soo-Youl Oh (KAERI).

1:00 PM An Assessment of ENDF/B-VI Releases Using the MCNP Criticality Validation Suite, Russell D. Mosteller (LANL)

1:20 PM Generation and Performance of a Multigroup Coupled Neutron-Gamma Cross-Section Library for Deterministic and Monte Carlo Borehole Logging Analysis, J. Eduard Hoogenboom (Delft University of Technology), Ivo Kodeli (OECD), Daniel L Aldama (Jozef Stefan Institute), Piet F.a. De Leege, David Legrady (Delft University of Technology)

1:40 PM On the Importance of a New Formula for the Double Differential Scattering Kernel, Ron Dagan (FZK-Forschungzentrum Karlsruhe)

2:00 PM Effect of Energy Self-Shielding on Reactor Benchmark Problems, F. Arzu Alpan, Luiz Leal (ORNL), Arnaud Courcelle (CEA)

2:20 PM Development of a Methodology for Analysis of the Impact of Modifying Neutron Cross Sections, Michael T. Wenner, Alireza Haghighat (University of Florida)

2:40 PM The Fission Spectrum Uncertainty, Bryan Broadhead (University of Tennessee, Battelle), Jekutiel Jehudah Wagschal (Hebrew University of Jerusalem)



3:00 PM The TRADE Experiment: Importance of Neutron Cross-Sections for Transmutation, Yacine Kadi, Adonai Herrera-Martinez, Marcus Dahlfors (European Organization for Nuclear Research)

3:20 PM Box-Cox Transformation for Resolving the Peelle's Pertinent Puzzle in a Curve Fitting, Soo-Youl Oh (Korea Atomic Energy Research Institute)

**Session 8C Physics Code Validation** ***Columbus H***

Session Organizers: Alain Santamarina (CEA Cadarache), Robert Jacqmin (CEA Cadarache), Richard Sanchez (CEA). Session Chairs: Alain Santamarina (CEA Cadarache).

1:00 PM Benchmark Calculation of WIMS/RFSP against Wolsong Nuclear Power Plants 3 and 4 Physics Measurement Data, Hangbok Choi, Donghwan Park (Korea Atomic Energy Research Institute)

1:20 PM Qualification of MCNP Coolant Void Reactivity Calculations using ZED-2 Measurements, Ken Kozier (Atomic Energy of Canada Ltd.)

1:40 PM Comparisons of DYN3D Calculations with Measurements at the V-1000 Test Facility, Ulrich Grundmann (Forschungszentrum Rossendorf (FZR)), Siegfried Mittag (Forschungszentrum Rossendorf Inc.)

2:00 PM Validation of SCALE4.4a/CSAS25 for Nuclear Criticality Safety Analyses, Robert H. Smith (BWXT Y-12), John Declue, Cris Worley (Y-12 National Security Complex)

2:20 PM The Nuclear Heating Calculation Scheme for Material Testing in the Future Jules Horowitz Reactor, Nicolas Huot, Arnaud Courcelle, David Blanchet, Jacques Di-Salvo, Cristophe Doderlein, Hugues Serviere, Guy Pierre Willermoz (CEA - Cadarache), Alain Aggery (CEA - Saclay)

2:40 PM Analysis of the ZPR-9 Gas-Cooled Fast Reactor Experiments Using JEF-2.2 Data and the ERANOS Code System, Jean Tommasi (CEA)

3:00 PM Spatially and Temperature Dependent Dancoff Method for LWR Lattice Physics Code, Hideki Matsumoto (Mitsubishi Heavy Industries, Ltd. (Japan)), Mohamed Ouisloumen (Westinghouse Electric Company), Yoshihisa Tahara (Mitsubishi Heavy Industries, Ltd. (Japan))

**Session 8D Reactor Analysis Methods** ***Columbus IJ***

Session Organizers: Giuseppe Palmiotti (ANL), Giovanni Bruna (Framatome ANP), Jasmina Vujic (UC Berkley). Session Chairs: Cecil Parks (ORNL), Jasmina Vujic (UC Berkley).

1:00 PM French Calculation Schemes for Light Water Reactor Analysis, Alain Santamarina (CEA), P. Bioux (EDF/DRD), Christian Garat (FRAMATOME-ANP SAS), Christine Poinot (CEA)

1:20 PM Irradiation Experiment Analysis for Cross Section Validation, Giuseppe Palmiotti (ANL)

1:40 PM Methodologies for Treatment of Spectral Effects at Core-Reflector Interfaces in Fast Neutron Systems, Gerardo Aliberti (ANL)

2:00 PM Effect of Pellet Radial Power and Temperature Distribution on Fuel Assembly Neutronics, Mohamed Ouisloumen, (Westinghouse Electric Corporation), Emily Wolters (Westinghouse Company), Hideki Matsumoto (Mitsubishi Heavy Industries, Ltd)

2:20 PM A Comparison of Binary Stochastic Media Transport Models in 'Solid-Void' Mixtures, Ian Davis, Todd S. Palmer (Oregon State University), Edward W. Larsen (University of Michigan)

2:40 PM Development of an Object Oriented Nodal Code using the Refined AFEN Derived from the Method of Component Decomposition, Jae Man Noh, Jae-Woon Yoo, Hyung-Kook Joo (Korea Atomic Energy Research Institute)

3:00 PM Applications of Modal-Local Analysis for Source-Driven Subcritical Systems, Viktoriya V. Kulik (University of Michigan), John Lee (University of Michigan)

3:20 PM Development of a Polynomial Nodal Model for the Multi Group Diffusion Equation in 2-D, Afshin Shojaei (Esfahan Nuclear Technology Center, Iran)



# Papers by Author

| | Author | Title | Session |
|---|---|---|---|
| A | Adomavicius, Arvydas | *The Studies of RBMK-1500 Reactor Core Behavior during Abnormal Operation Transients* | 4A |
| | Aggery, Alain | *Method of Characteristics Applied to a MTR Whole Core Modeling* | 1D |
| | Aggery, Alain | *The Nuclear Heating Calculation Scheme for Material Testing in the Future Jules Horowitz Reactor* | 8C |
| | Aggery, Alain | *HORUS3D Code Package Development and Validation for the JHR Modeling* | 6D |
| | Agostini, Pietro | *The TRADE Experiment: Status of the Project and Physics of the Spallation Target* | 2B |
| | Agung, Alexander | *Passive Decay Heat Removal in a Fluidized Bed Nuclear Reactor* | 7A |
| | Aisen, Elyaz M. | *An Influence of Core Physics Peculiarities upon the Thermal Hydraulics Performance in Cascade Subcritical Molten Salt Reactor* | 4A |
| | Akiba, Miyuki | *Reduced Moderation BWR with Advanced Recycle System (BARS)* | 6A |
| | Aldama, Daniel L | *Generation and Performance of a Multigroup Coupled Neutron-Gamma Cross-Section Library for Deterministic and Monte Carlo Borehole Logging Analysis* | 8B |
| | Alekseev, Pavel N. | *Studies of Physical Features of Cascade Subcritical Molten Salt Reactor with External Neutron Source* | 7A |
| | Alekseev, Pavel N. | *Influence of Nuclear Fuel Cycle Duration and Reprocessing Losses Level on the Nuclear Power System Structure* | 3C |
| | Aliberti, Gerardo | *Neutronics Design Studies for a 400 MWt STAR-LM* | 6A |
| | Aliberti, Gerardo | *Methodologies for Treatment of Spectral Effects at Core-Reflector Interfaces in Fast Neutron Systems* | 8D |
| | Aliberti, Gerardo | *Reactivity Assessment and Spatial Time-Effects from the MUSE Kinetics Experiments* | 3A |
| | Alim, Fatih | *Modeling of Existing Beam-Port Facility at PSU Breazeale Reactor by Using MCNP* | 7D |
| | Alonso, Gustavo | *Solution of the 1D Kinetic Diffusion Equations Using a Reduced Nodal Cubic Scheme* | 4A |
| | Alpan, F. Arzu | *Effect of Energy Self-Shielding on Reactor Benchmark Problems* | 8B |
| | Al-Qasir, Iyad I. | *Thermal Neutron Scattering Cross Sections of Thorium Hydride* | 2C |
| | Al-Qasir, Iyad I. | *Ab Initio Generation of Thermal Neutron Scattering Cross Sections* | 2C |
| | Altiparmakov, Dimitar | *Reactor Core Simulations in Canada* | 5D |
| | Andristos, Dimitrios | *AGENT Code: Open-Architecture Analysis and Configuration of Research Reactors – Graphic Tools* | 4A |
| | Aniel, Sylvie | *OECD/DOE/CEA VVER-1000 Coolant Transient (V1000CT) Benchmark for Assessing Coupled Neutronics/Thermal-Hydraulics System Codes for VVER-1000 RIA Analysis* | 7C |
| | Anistratov, Dmitriy Y | *Spatially Consistent Coarse-Mesh Discretization of the Low-Order Quasidiffusion Equations* | 2D |
| | Anistratov, Dmitriy Y | *Coarse-Mesh Discretized Low-Order Quasidiffusion Equations for Subregion Averaged Scalar Fluxes* | 2D |
| | Antony, Muriel | *MINERVE Reactor Characterization in Support of the OSMOSE Program: Spectral Indices* | 1A |
| | Antony, Muriel | *MINERVE Reactor Characterization in Support of the OSMOSE Program: Safety Parameters* | 4A |
| | Apse, Vladimir Alexandrovich | *High Fuel Burn-up and Nonproliferation in PWR-type Reactor on the Basis of Modified U- and Th-fuels* | 5A |
| | Aronson, Arnold | *Analysis of Boron Dilution Transients in PWRs* | 6B |
| | Aronson, Arnold | *Optimization Studies for Seed-and-Blanket Unit (SBU) Fuel Assemblies in PWRs* | 8A |
| | Avdic, Senada D. | *Support Vector Machine in Classification of Positron Lifetime Spectra* | 2C |
| | Avramova, Maria Nikolova | *Improving the Computation Efficiency of COBRA-TF for LWR Safety Analysis of Large Problems* | 6B |
| | Avvakumov, Alexander | *Effect of Spatial Power Distribution during Reactivity Initiated Accidents in a PWR* | 6B |
| | Azmy, Yousry Youssef | *Solving the Neutron Diffusion Equation on Combinatorial Geometry Computational Cells for Reactor Physics Calculations* | 5D |
| | Azmy, Yousry Youssef | *Solutions to the New C5G7MOX Three-Dimensional Transport Benchmarks Using the TORT Code* | 3D |
| | Azmy, Yousry Youssef | *Modeling of Existing Beam-Port Facility at PSU Breazeale Reactor by Using MCNP* | 7D |
| B | Badea, Madelena | *Cross-Section Generation for TRADE Fuel* | 4A |
| | Bae, Sung-Man | *Application of the Dynamic Control Rod Reactivity Measurement Method to Korea Standard Nuclear Power Plants* | 3A |
| | Baker, Steven | *EPRI BWRVIP 3-D RAMA Fluence Methodology Benchmarking* | 2C |
| | Baker, Steven | *TransLAT Lattice Physics Code Benchmark to the B&W Gadolinia Criticals* | 3D |
| | Barnes, David | *LWR Spent Fuel Fed Molten Salt Reactor Design and Analysis* | 8A |
| | Bathke, Charles G. | *Dynamic Analysis of the AFCI Scenarios* | 3C |
| | Baxter, Alan | *Uncertainty Analysis and Optimization Studies on the Deep-Burner Modular Helium Reactor (DB-MHR) for Actinide Incineration* | 2A |
| | Beati, Jessica | *Monte-Carlo Techniques to Simulate Pebble Dislocations in a PB-MR during Depletion* | 4A |
| | Beeley, Philip A. | *A Three Dimensional Two Energy Group Coupled Reactor Physics and Thermal Hydraulics Code (M32) - A Tool for Student Design Studies* | 7D |
| | Bejmer, Klaes-Håkan | *Enriched Gadolinium as Burnable Absorber for PWR* | 5A |
| | Belousov, Anton | *The Studies of RBMK-1500 Reactor Core Behavior during Abnormal Operation Transients* | 4A |
| | Bernnat, Wolfgang | *Scattering Law Data for Graphite in Gas Cooled High Temperature Reactors* | 7B |
| | Billebaud, Annick | *Reactivity Measurements and Neutron Spectrometry in the MUSE-4 Experiment* | 5C |
| | Billebaud, Annick | *Molten Salt Reactors and Possible Scenarios for Future Nuclear Power Deployment* | 7A |
| | Bioux, P. | *French Calculation Schemes for Light Water Reactor Analysis* | 8D |
| | Blanchet, David | *The Nuclear Heating Calculation Scheme for Material Testing in the Future Jules Horowitz Reactor* | 8C |
| | Blanchet, David | *A New De-homogenisation Method for Local Power Reconstruction* | 3B |
| | Blanc-Tranchant, Patrick | *HTGR Actinide Burner Feasibility Studies: Calculation Scheme Related Considerations* | 2A |

| | Author | Title | Session |
|---|---|---|---|
| | Boccaccini, Claudia Matzerath | *Source and Reactivity Perturbations in Accelerator Driven Systems with Conventional MOX and Advanced Fertile Free Fuel* | 7C |
| | Borresen, Sigurd | *Spent Nuclear Fuel Analyses Based on In-Core Fuel Management Calculations* | 5A |
| | Bosq, Jean-Christophe | *Methodology for a Large Gas-Cooled Fast Reactor Core Design and Associated Neutronic Uncertainties* | 5B |
| | Brault, Leandre | *GT-MHR Core Modelling: From Reference Modelling Definition in Monte-Carlo Code to Calculation Scheme Validation* | 5B |
| | Braverman, Evgeny | *Bruce 'B' Core Conversion* | 6B |
| | Brenizer, Jack | *Thermal Neutron Time-of-Flight Spectroscopy at Penn State using a Single-Disk Chopper* | 7D |
| | Brenizer, Jack | *Modeling of Existing Beam-Port Facility at PSU Breazeale Reactor by Using MCNP* | 7D |
| | Brissot, Roger | *Reactivity Measurements and Neutron Spectrometry in the MUSE-4 Experiment* | 5C |
| | Brissot, Roger | *Molten Salt Reactors and Possible Scenarios for Future Nuclear Power Deployment* | 7A |
| | Broadhead, Bryan | *The Fission Spectrum Uncertainty* | 8B |
| | Broeders, Cornelis H. M. | *The TRADE Experiment: Status of the Project and Physics of the Spallation Target* | 2B |
| | Broeders, Cornelis H. M. | *Cross-Section Generation for TRADE Fuel* | 4A |
| | Bromley, Blair P. | *Analysis of Boron Dilution Transients in PWRs* | 6B |
| | Bromley, Blair P. | *Optimization Studies for Seed-and-Blanket Unit (SBU) Fuel Assemblies in PWRs* | 8A |
| | Brown, Craig | *ALAADIN/FLS - A BWR Fast Lattice Design Simulation Tool* | 5A |
| | Brown, Forrest | *Monte Carlo Parameter Studies and Uncertainty Analyses with MCNP5* | 1B |
| | Brown, Forrest | *Continuously Varying Material Properties and Tallies for Monte Carlo Calculations* | 1B |
| | Bruna, Giovanni | *Monte-Carlo Techniques to Simulate Pebble Dislocations in a PB-MR during Depletion* | 4A |
| | Bruna, Giovanni B. | *Uncertainty Analysis on Back-end Fuel Cycle Main Parameters* | 3C |
| | Bruna, Giovanni B. | *Uncertainty Analysis and Optimization Studies on the Deep-Burner Modular Helium Reactor (DB-MHR) for Actinide Incineration* | 2A |
| | Brushwood, James | *A Three Dimensional Two Energy Group Coupled Reactor Physics and Thermal Hydraulics Code (M32) - A Tool for Student Design Studies* | 7D |
| | Buiron, Laurent | *Neutronic Modeling for a Gas-Cooled Fast Reactor Assuming Coated Fuel Particles* | 5B |
| | Burgio, Nunzio | *Monte-Carlo Techniques to Simulate Pebble Dislocations in a PB-MR during Depletion* | 4A |
| | Burgio, Nunzio | *The TRADE Experiment: Status of the Project and Physics of the Spallation Target* | 2B |
| C | Cahalan, James E. | *Physics and Safety Studies of a 0.25 Conversion Ratio Sodium Cooled Fast Reactor* | 6A |
| | Carlier, Bertrand | *Uncertainty Analysis on Back-end Fuel Cycle Main Parameters* | 3C |
| | Carta, Mario | *The TRADE Source Multiplication Experiments* | 5C |
| | Carta, Mario | *The TRADE Experiment: Status of the Project and Physics of the Spallation Target* | 2B |
| | Carta, Mario | *Reactivity Assessment and Spatial Time-Effects from the MUSE Kinetics Experiments* | 3A |
| | Cathalau, Stephane | *High Moderation BWRs Fully Loaded with MOX Fuel: The BASALA Experimental Programme* | 1C |
| | Cecille, Krakowiak-Aillaud | *The TRADE Experiment: Status of the Project and Physics of the Spallation Target* | 2B |
| | Chabert, Christine | *Benchmark Comparisons of Deterministic and Monte Carlo Codes for a PWR Heterogeneous Assembly Design* | 3D |
| | Chang, Moon Hee | *Consistent Comparison of Monte Carlo and Whole-Core Transport Solutions for Cores with Thermal Feedback* | 1A |
| | Charlton, William S. | *Reactor-Accelerator Coupled Experiments (RACE): A Feasibility Study at TAMU* | 2B |
| | Chaussonnet , Pascal | *Reactivity Measurements and Neutron Spectrometry in the MUSE-4 Experiment* | 5C |
| | Chawla, Rakesh | *TRAC-M/AAA Code Assessment for Transient Analysis of Pb-Bi Cooled Fast-Spectrum Reactor Systems* | 7C |
| | Chawla, Rakesh | *Assessment of CASMO-4 Predictions of the Isotopic Inventory of High Burn-up MOX Fuel* | 6C |
| | Chawla, Rakesh | *Uncertainty Analysis Applied to Fuel Depletion Calculations* | 6C |
| | Chen, Xue-Nong | *Source and Reactivity Perturbations in Accelerator Driven Systems with Conventional MOX and Advanced Fertile Free Fuel* | 7C |
| | Chiba, Gou | *JOYO MK-III Performance Test at Low Power and Its Analysis* | 1C |
| | Cho, Choong Ho | *A Core Design for a Single Fuel Enrichment in a Self-Sustaining Lead-Cooled Reactor* | 6A |
| | Cho, Jin Young | *Methods and Performance of a Three-Dimensional Whole-Core Transport Code DeCART* | 1A |
| | Cho, Jin Young | *Consistent Comparison of Monte Carlo and Whole-Core Transport Solutions for Cores with Thermal Feedback* | 1A |
| | Cho, Nam | *An Approach of Super-Element Sweeping for the Solution of Neutron Transport Equation in Heterogeneous Geometry* | 6D |
| | Choi, Hangbok | *Benchmark Calculation of WIMS/RFSP against Wolsong Nuclear Power Plants 3 and 4 Physics Measurement Data* | 8C |
| | Coddington, Paul | *TRAC-M/AAA Code Assessment for Transient Analysis of Pb-Bi Cooled Fast-Spectrum Reactor Systems* | 7C |
| | Conti, Alain | *Methodology for a Large Gas-Cooled Fast Reactor Core Design and Associated Neutronic Uncertainties* | 5B |
| | Coste-Delclaux, Mireille | *New Resonant Mixture Self-Shielding Treatment in the APOLLO2 Code* | 3A |
| | Courcelle, Arnaud | *JEF2.2 nuclear data statistical adjustment using Post-Irradiation Experiments* | 7B |
| | Courcelle, Arnaud | *Validation of Depletion Calculation through TAKAHAMA-3 Chemical Assays with JEFF3.0* | 1C |
| | Courcelle, Arnaud | *The Nuclear Heating Calculation Scheme for Material Testing in the Future Jules Horowitz Reactor* | 8C |
| | Courcelle, Arnaud | *Effect of Energy Self-Shielding on Reactor Benchmark Problems* | 8B |
| | Criekingen, Serge Van | *Mixed-Hybrid Methods for the Linear Transport Equation* | 5D |
| | Cuervo, Diana | *Improving the Computation Efficiency of COBRA-TF for LWR Safety Analysis of Large Problems* | 6B |

| | Author | Title | Session |
|---|---|---|---|
| D | Da Cruz, Dirceu F. | *PBMR Deep-Burn: A Pebble-Bed HTGR Burning Its Own 'Waste'* | 2A |
| | Da Silva, José Eduardo Rosa | *Sipping Tests on a Failed Irradiated MTR Fuel Element* | 4A |
| | Dagan, Ron | *Cross-Section Generation for TRADE Fuel* | 4A |
| | Dagan, Ron | *On the Importance of a New Formula for the Double Differential Scattering Kernel* | 8B |
| | Dahlfors, Marcus | *The TRADE Experiment: Importance of Neutron Cross-Sections for Transmutation* | 8B |
| | Dahmani, Mohamed | *3D Characteristics Method with Linearly Anisotropic Scattering* | 1D |
| | Dahmani, Mohamed | *New Computational Methodology for Large 3D Neutron Transport Problems* | 5A |
| | D'aletto, Corinne | *Method of Characteristics Applied to a MTR Whole Core Modeling* | 1D |
| | Damian, Frederic | *GT-MHR Core Modelling: From Reference Modelling Definition in Monte-Carlo Code to Calculation Scheme Validation* | 5B |
| | Damian, Frederic | *HTGR Actinide Burner Feasibility Studies: Calculation Scheme Related Considerations* | 2A |
| | D'Angelo, Antonio | *Reactivity Assessment and Spatial Time-Effects from the MUSE Kinetics Experiments* | 3A |
| | Danilytchev, A. | *BN-600 Full MOX Core Benchmark Analysis* | 1C |
| | Daudin, Lucien | *Benchmark of MONTEBURNS against Measurements on Irradiated UOX and MOX Fuels* | 1B |
| | D'Auria, Francesco S. | *Study of Nuclear Fuel Behavior with Coupled 3D Neutronics/Thermal-Hydraulic Codes* | 7C |
| | D'Auria, Francesco S. | *Uncertainty Evaluation of the Results of the MSLB Benchmark by CIAU Methodology* | 6B |
| | D'Auria, Francesco S. | *Peach Bottom-2 Low-Flow Stability Test using Trac-Bf1/Valkin and Relap5-Mod.3.3/Parcs Codes* | 6B |
| | David, Bernard | *Experimental Validation of APOLLO2 Code for High Burnup MOx Fuels. JEF2.2 Results and JEFF3.0 Improvements* | 6C |
| | David, Sylvain | *Molten Salt Reactors and Possible Scenarios for Future Nuclear Power Deployment* | 7A |
| | Davis, Ian | *A Comparison of Binary Stochastic Media Transport Models in 'Solid-Void' Mixtures* | 8D |
| | De Abreu, Marcos P. | *Albedo Conditions for Multigroup Anisotropic Scattering Models of Nuclear Reactors* | 6D |
| | De Haas, J. B. M. | *PBMR Deep-Burn: A Pebble-Bed HTGR Burning Its Own 'Waste'* | 2A |
| | De Leege, Piet F. A. | *HOR: Criticality Comparison Using a Nodal Code, Monte Carlo Codes and Plant Data* | 3B |
| | De Leege, Piet F. A. | *Monte Carlo Calculation of the Effects of Delayed Neutron Precursor Transport in Molten Salt Reactors* | 7A |
| | De Leege, Piet F. A. | *Generation and Performance of a Multigroup Coupled Neutron-Gamma Cross-Section Library for Deterministic and Monte Carlo Borehole Logging Analysis* | 8B |
| | De L'Hermite, Anne | *Definition of a Calculation Scheme with MONTEBURNS for Decay Heat Calculations of HTR Fuel* | 4A |
| | DeClue, John | *Validation of SCALE4.4a/CSAS25 for Nuclear Criticality Safety Analyses* | 8C |
| | Del Valle, Edmundo | *Solution of the 1D Kinetic Diffusion Equations Using a Reduced Nodal Cubic Scheme* | 4A |
| | Delfin, Arturo | *Solution of the 1D Kinetic Diffusion Equations Using a Reduced Nodal Cubic Scheme* | 4A |
| | Demazière, Christophe | *On-line Determination of the Prompt Fraction of In-Core Neutron Detectors in CANDU Reactors* | 4A |
| | Derrien, Herve | *New Neutron Cross Section Measurements at ORELA for Improved Nuclear Data* | 7B |
| | Derrien, Herve | *Status of a New Evaluation of the Neutron Resonance Parameters of 238U at ORNL* | 7B |
| | Destouches, Cristophe | *Reactivity Measurements and Neutron Spectrometry in the MUSE-4 Experiment* | 5C |
| | Di Salvo, Jacques | *Method of Characteristics Applied to a MTR Whole Core Modeling* | 1D |
| | Di Salvo, Jacques | *The Nuclear Heating Calculation Scheme for Material Testing in the Future Jules Horowitz Reactor* | 8C |
| | Di Salvo, Jacques | *A New De-homogenisation Method for Local Power Reconstruction* | 3B |
| | Di Salvo, Jacques | *HORUS3D Code Package Development and Validation for the JHR Modeling* | 6D |
| | Diamond, David | *Analysis of Boron Dilution Transients in PWRs* | 6B |
| | Diniz, Ricardo | *The Experimental Determination of the Effective Delayed Neutron Parameters: Beff, Beff/LAMBDA and LAMBDA of the IPEN/MB-01 Reactor* | 1C |
| | Diniz, Ricardo | *The Experimental Determination of the Relative Abundances and Decay Constants of Delayed Neutrons of the IPEN/MB-01 Reactor* | 1C |
| | Doderlein, Christoph | *The Nuclear Heating Calculation Scheme for Material Testing in the Future Jules Horowitz Reactor* | 8C |
| | Doderlein, Christoph | *A New De-homogenisation Method for Local Power Reconstruction* | 3B |
| | Doderlein, Christoph | *HORUS3D Code Package Development and Validation for the JHR Modeling* | 6D |
| | Dolci, Florence | *HTGR Actinide Burner Feasibility Studies: Calculation Scheme Related Considerations* | 2A |
| | Donnet, Louis | *OSMOSE: An Experimental Program for the Qualification of Integral Cross Sections of Actinides* | 1A |
| | Downar, Thomas J | *Numerical Convergence Analysis of the Nonlinear CMFD Method for Three-Dimensional Two-Group LWR Diffusion Problems* | 6D |
| | Downar, Thomas J. | *Convergence Analysis of 2-D/1-D Coupling Strategies for Diffusion Equation* | 6D |
| | Downar, Thomas J. | *Benchmarking DeCART (Deterministic Core Analysis based on Ray Tracing) with the VENUS-2* | 6C |
| | Downar, Thomas J. | *Methodology for Coupling Computational Fluid Dynamics with Integeral Transport Neutronics* | 1A |
| | Downar, Thomas J. | *The Implementation of Pin-Cell Discontinuity Factors in PARCS Using an Artificial Neural Network with Application to MOX Fuel Analysis* | 2D |
| | Drin, Nicolas | *OSMOSE: An Experimental Program for the Qualification of Integral Cross Sections of Actinides* | 1A |
| | Duckett, Sean | *Radiation Shielding Estimates for Interplanetary Manned Missions* | 4A |
| | Dudnikov, Anatoly A. | *Studies of Physical Features of Cascade Subcritical Molten Salt Reactor with External Neutron Source* | 7A |
| | Dudnikov, Anatoly A. | *Influence of Nuclear Fuel Cycle Duration and Reprocessing Losses Level on the Nuclear Power System Structure* | 3C |
| | Dulla, Sandra | *Reactivity Assessment and Spatial Time-Effects from the MUSE Kinetics Experiments* | 3A |
| | Dulla, Sandra | *On Some Features of Quasi-Static Schemes in Reactor Kinetics* | 6D |
| | Dunn, Michael | *Point KENO V.a: A Continuous-Energy Monte Carlo Code for Criticality Safety Applications* | 1B |



| | Author | *Title* | Session |
|---|---|---|---|
| **E** | Endo, Tomohiro | *Derivation of the Space and Energy Dependent Formula for the Third Order Neutron Correlation Technique* | 4A |
| | Enrico, Girardi | *A New Method for the Treatment of Strong Local Heterogeneities and Its Application to the PHEBUS Experimental Facility* | 5D |
| **F** | Failla, Greg | *Investigating the Use of 3-D Deterministic Transport for Core Safety Analysis* | 5D |
| | Fanaro, Leda C. C. B. | *The Experimental Determination of the Effective Delayed Neutron Parameters: Beff, Beff/LAMBDA and LAMBDA of the IPEN/MB-01 Reactor* | 1C |
| | Feher, Anselmo | *Research Reactor Application to Iridium-192 Production for Cancer Treatment* | 2C |
| | Filipescu, D. | *Measurement and Calculation of the 233Pa Fission Cross-Section for Advanced Fuel Cycles* | 7B |
| | Finck, Phillip J. | *Dynamic Analysis of the AFCI Scenarios* | 3C |
| | Flaska, Marek | *Towards an Improved GELINA Neutron Target* | 2B |
| | Fleneus, M | *Measurement and Calculation of the 233Pa Fission Cross-Section for Advanced Fuel Cycles* | 7B |
| | Fogelberg, Birger | *Measurement and Calculation of the 233Pa Fission Cross-Section for Advanced Fuel Cycles* | 7B |
| | Fomichenko, Peter A. | *Studies of Physical Features of Cascade Subcritical Molten Salt Reactor with External Neutron Source* | 7A |
| | Fomichenko, Peter A. | *An Influence of Core Physics Peculiarities upon the Thermal Hydraulics Performance in Cascade Subcritical Molten Salt Reactor* | 4A |
| | Fomichenko, Peter A. | *Possibility to Use Different Fuel Cycles in GT-MHR* | 5B |
| | Forget, Benoit | *CANDU Reactor Simulations with a Full P1 Method* | 4A |
| | Forget, Benoit | *Application of a Heterogeneous Coarse Mesh Transport Method to a MOX Benchmark Problem* | 2D |
| | Fougeras, Phillippe | *OSMOSE: An Experimental Program for the Qualification of Integral Cross Sections of Actinides* | 1A |
| | Fratoni, Massimiliano | *LWR Spent Fuel Fed Molten Salt Reactor Design and Analysis* | 8A |
| | Fritsch, Volker | *Measurement and Calculation of the 233Pa Fission Cross-Section for Advanced Fuel Cycles* | 7B |
| **G** | Gabrielli, Fabrizio | *Reactivity Assessment and Spatial Time-Effects from the MUSE Kinetics Experiments* | 3A |
| | Gallo, Danielle | *HORUS3D Code Package Development and Validation for the JHR Modeling* | 6D |
| | Galperin, Alex | *Optimization Studies for Seed-and-Blanket Unit (SBU) Fuel Assemblies in PWRs* | 8A |
| | Gandini, Augusto | *Monte-Carlo Techniques to Simulate Pebble Dislocations in a PB-MR during Depletion* | 4A |
| | Gandini, Augusto | *LWR Spent Fuel Fed Molten Salt Reactor Design and Analysis* | 8A |
| | Garat, Christian | *GT-MHR Core Modelling: From Reference Modelling Definition in Monte-Carlo Code to Calculation Scheme Validation* | 5B |
| | Garat, Christian | *French Calculation Schemes for Light Water Reactor Analysis* | 8D |
| | Gardner, Kenneth | *Diagnostic Tool for Assessing Anomalous Trends in BWR Core Tracking* | 2D |
| | Garnier, Jean-Claude | *Methodology for a Large Gas-Cooled Fast Reactor Core Design and Associated Neutronic Uncertainties* | 5B |
| | Gehin, Jess C. | *Solutions to the New C5G7MOX Three-Dimensional Transport Benchmarks Using the TORT Code* | 3D |
| | Genin, Xavier | *OSMOSE: An Experimental Program for the Qualification of Integral Cross Sections of Actinides* | 1A |
| | Gillette, Victor Hugo | *Thermal Neutron Scattering Cross Sections of Thorium Hydride* | 2C |
| | Gillette, Victor Hugo | *Ab Initio Generation of Thermal Neutron Scattering Cross Sections* | 2C |
| | Ginestar, Damian | *Peach Bottom-2 Low-Flow Stability Test using Trac-Bf1/Valkin and Relap5-Mod.3.3/Parcs Codes* | 6B |
| | Girard, Jean-Michel | *MINERVE Reactor Characterization in Support of the OSMOSE Program: Spectral Indices* | 1A |
| | Girard, Jean-Michel | *MINERVE Reactor Characterization in Support of the OSMOSE Program: Safety Parameters* | 4A |
| | Glockler, Oszvald | *On-line Determination of the Prompt Fraction of In-Core Neutron Detectors in CANDU Reactors* | 4A |
| | Glushkov, E. | *Possibility to Use Different Fuel Cycles in GT-MHR* | 5B |
| | Goddard, Anthony J. | *Passive Decay Heat Removal in a Fluidized Bed Nuclear Reactor* | 7A |
| | Golfier, Hervé | *Neutronic Modeling for a Gas-Cooled Fast Reactor Assuming Coated Fuel Particles* | 5B |
| | Gomez, Armando | *Solution of the 1D Kinetic Diffusion Equations Using a Reduced Nodal Cubic Scheme* | 4A |
| | Gonzalez-Romero, Enrique M. | *Reactivity Assessment and Spatial Time-Effects from the MUSE Kinetics Experiments* | 3A |
| | Gonzalez-Romero, Enrique M. | *The MUSE Pulsed Neutron Source experiments* | 5C |
| | Gougar, Hans D. | *Design of Pebble-Bed Reactors Using a Genetic Algorithm* | 4A |
| | Gougar, Hans D. | *Investigating the Use of 3-D Deterministic Transport for Core Safety Analysis* | 5D |
| | Gougar, Hans D. | *Optimal Moderation in the Pebble-Bed Reactor for Enhanced Passive Safety and Improved Fuel Utilization* | 5B |
| | Granget, Gilbert | *The TRADE Source Multiplication Experiments* | 5C |
| | Greene, Maurice | *Point KENO V.a: A Continuous-Energy Monte Carlo Code for Criticality Safety Applications* | 1B |
| | Greenspan, Ehud | *LWR Spent Fuel Fed Molten Salt Reactor Design and Analysis* | 8A |
| | Greenspan, Ehud | *On the Capability of SMORES to Account for Self-Shielding in Search for Maximum keff* | 8A |
| | Griesheimer, David P. | *Continuously Varying Material Properties and Tallies for Monte Carlo Calculations* | 1B |
| | Griesheimer, David P. | *Two Dimensional Functional Expansion Tallies for Monte Carlo Simulations* | 1B |
| | Grimm, K. | *BN-600 Full MOX Core Benchmark Analysis* | 1C |
| | Groudev, Pavlin | *OECD/DOE/CEA VVER-1000 Coolant Transient (V1000CT) Benchmark for Assessing Coupled Neutronics/Thermal-Hydraulics System Codes for VVER-1000 RIA Analysis* | 7C |
| | Grummer, Ralph G. | *ALAADIN/FLS - A BWR Fast Lattice Design Simulation Tool* | 5A |
| | Grundmann, Ulrich | *Comparisons of DYN3D Calculations with Measurements at the V-1000 Test Facility* | 8C |
| | Gu, Albert G. | *ALAADIN/FLS - A BWR Fast Lattice Design Simulation Tool* | 5A |
| | Guber, Klaus H. | *New Neutron Cross Section Measurements at ORELA for Improved Nuclear Data* | 7B |
| | Gudowski, Waclaw | *Impact of Heterogeneous Cm Distribution on Proton Source Efficiency in Accelerator-driven Systems* | 2B |

| | Author | Title | Session |
|---|---|---|---|
| | Gudowski, Waclaw | *Studies of a Deep Burn Fuel Cycle for the Incineration of Military Plutonium in the GT-MHR using the Monte-Carlo Burnup Code* | 2A |
| | Gunji, Satoshi | *Study of Accelerator Transient on ADS Operation Using TRACY(TRAnsient experiment Critical facilitY)* | 6A |
| | Gustafsson, C. | *Measurement and Calculation of the 233Pa Fission Cross-Section for Advanced Fuel Cycles* | 7B |
| | Gylys, Jonas | *The Studies of RBMK-1500 Reactor Core Behavior during Abnormal Operation Transients* | 4A |
| H | Haghighat, Alireza | *The Simplified Even-Parity SN Equations Applied to a MOX Fuel Assembly Benchmark Problem on Distributed Memory Environments* | 4A |
| | Haghighat, Alireza | *Monte Carlo Modeling of a Time-of-Flight (ToF) Experiment for Determination of Fe Scattering Cross Sections* | 3A |
| | Haghighat, Alireza | *Development of a Methodology for Analysis of the Impact of Modifying Neutron Cross Sections* | 8B |
| | Hahn, Dianna M. | *Efficient Hybrid NEM/BEM Transient Method* | 6D |
| | Hambsch, Franz-Josef | *Measurement and Calculation of the 233Pa Fission Cross-Section for Advanced Fuel Cycles* | 7B |
| | Han, Beom Seok | *Consistent Comparison of Monte Carlo and Whole-Core Transport Solutions for Cores with Thermal Feedback* | 1A |
| | Hanayama, Yasushi | *The Feasibility Study of the Minimum-Shuffling Reloading Strategy for PWR* | 5A |
| | Harvey, Jack A. | *New Neutron Cross Section Measurements at ORELA for Improved Nuclear Data* | 7B |
| | Hawari, Ayman I. | *Thermal Neutron Scattering Cross Sections of Thorium Hydride* | 2C |
| | Hawari, Ayman I. | *Ab Initio Generation of Thermal Neutron Scattering Cross Sections* | 2C |
| | Hayes, Robert Bruce | *Monte Carlo Parameter Studies and Uncertainty Analyses with MCNP5* | 1B |
| | Hazama, Taira | *Reduction of Cross-Section-Induced Errors of the BN-600 Hybrid Core Nuclear Parameters by Using BFS-62 Critical Experiment Data* | 4A |
| | Hazama, Taira | *Re-Evaluation of SEFOR Doppler Experiments and Analyses with JNC and ERANOS systems* | 5C |
| | Hazama, Taira | *Uncertainty Analysis Results on BN-600 Hybrid Core Nuclear Physics Characteristics* | 4A |
| | Hebert, Alain | *Application of the DSA Preconditioned GMRES Formalism to the Method of Characteristics - First Results* | 1D |
| | Hebert, Alain | *A Mutual Resonance Shielding Model Consistent with Ribon Subgroup Equations* | 1D |
| | Hendricks, John | *Eigenfunction Convergence and Transmutation Enhancements in MCNPX* | 1B |
| | Herrera-Martinez, Adonai | *The TRADE Experiment: Status of the Project and Physics of the Spallation Target* | 2B |
| | Herrera-Martinez, Adonai | *The TRADE Experiment: Importance of Neutron Cross-Sections for Transmutation* | 8B |
| | Herring, J. Stephen | *Dynamic Analysis of the AFCI Scenarios* | 3C |
| | Heuer, Daniel | *Reactivity Measurements and Neutron Spectrometry in the MUSE-4 Experiment* | 5C |
| | Heuer, Daniel | *Molten Salt Reactors and Possible Scenarios for Future Nuclear Power Deployment* | 7A |
| | Hill, Robert N. | *Assessment of Reduced Moderation Water Reactor Fuel Cycle* | 3C |
| | Hill, Robert N. | *Neutronics Design Studies for a 400 MWt STAR-LM* | 6A |
| | Hill, Robert N. | *BN-600 Full MOX Core Benchmark Analysis* | 1C |
| | Hill, Robert N. | *Physics and Safety Studies of a 0.25 Conversion Ratio Sodium Cooled Fast Reactor* | 6A |
| | Hill, Robert N. | *The Physics of TRU Transmutation -- A Systematic Approach to the Intercomparison of Systems* | 3C |
| | Hill, Robert N. | *Low-Conversion Ratio Gas-Cooled Fast Reactors* | 5B |
| | Hill, Robert N. | *Dynamic Analysis of the AFCI Scenarios* | 3C |
| | Hiraiwa, Kouji | *Reduced Moderation BWR with Advanced Recycle System (BARS)* | 6A |
| | Hiruta, Hikaru | *Spatially Consistent Coarse-Mesh Discretization of the Low-Order Quasidiffusion Equations* | 2D |
| | Hoeld, Alois | *Concept for a Thermal-Hydraulic 3D Parallel Channel Core Model* | 8A |
| | Hoffman, Edward A | *Low-Conversion Ratio Gas-Cooled Fast Reactors* | 5B |
| | Hollenbach, Dan F. | *Point KENO V.a: A Continuous-Energy Monte Carlo Code for Criticality Safety Applications* | 1B |
| | Hoogenboom, J. Eduard | *Theoretical and Practical Study of the Variance and Efficiency of a Monte Carlo Calculation due to Russian Roulette* | 1B |
| | Hoogenboom, J. Eduard | *Monte Carlo Midway Forward-Adjoint Coupling with Legendre Polynomials for Borehole Logging Applications* | 4A |
| | Hoogenboom, J. Eduard | *Generation and Performance of a Multigroup Coupled Neutron-Gamma Cross-Section Library for Deterministic and Monte Carlo Borehole Logging Analysis* | 8B |
| | Hoogenboom, J. Eduard | *Visualization of Space-Dependency of Responses of Monte Carlo Calculations Using Legendre Polynomials* | 4A |
| | Hotta, Akitoshi | *Localized Void Feedback Effects Under Single Rod Drop Transient in BWR* | 6B |
| | Hounshel, Derek | *Radiation Shielding Estimates for Interplanetary Manned Missions* | 4A |
| | Hu, Po | *Feasibility Issues in the Mixed Spectrum Supercritical Water Reactor* | 6A |
| | Hudelot, Jean-Pascal | *OSMOSE: An Experimental Program for the Qualification of Integral Cross Sections of Actinides* | 1A |
| | Hudelot, Jean-Pascal | *MINERVE Reactor Characterization in Support of the OSMOSE Program: Spectral Indices* | 1A |
| | Hudelot, Jean-Pascal | *MINERVE Reactor Characterization in Support of the OSMOSE Program: Safety Parameters* | 4A |
| | Humbert, Philippe P. | *Simulations of Caliban Fast Pulsed Reactor Burst Wait Time Distribution using PANDA* | 7A |
| | Humbert, Philippe P. | *PANDA Code Features and Application to the OECD/NEA 3D-MOX Assembly Benchmark Calculation* | 6C |
| | Huot, Nicolas | *The Nuclear Heating Calculation Scheme for Material Testing in the Future Jules Horowitz Reactor* | 8C |
| | Huot, Nicolas | *A New De-homogenisation Method for Local Power Reconstruction* | 3B |
| | Huot, Nicolas | *HORUS3D Code Package Development and Validation for the JHR Modeling* | 6D |
| | Hutton, Les | *Validation of WIMS9* | 1D |
| I | Ichihara, Chihiro | *Criticality Analysis of Highly Enriched Uranium / Thorium Fueled Thermal Spectrum Cores of Kyoto University Critical Assembly* | 5C |
| | Ikeda, Kazumi | *Cascade Reactor Concept for Neutron Multiplication of Subcritical Core* | 2A |



| | Author | Title | Session |
|---|---|---|---|
| | Imel, George | *The TRADE Source Multiplication Experiments* | 5C |
| | Imel, George | *Some Experimental Results from the Last Phases of the MUSE Program* | 5C |
| | Imel, George | *Study of the Influence of a Pulsed Source in the Kinetics Measurements in a Subcritical System* | 5C |
| | Imel, George | *Reactivity Assessment and Spatial Time-Effects from the MUSE Kinetics Experiments* | 3A |
| | Imel, George | *MINERVE Reactor Characterization in Support of the OSMOSE Program: Spectral Indices* | 1A |
| | Inoue, Yuichiro | *Effectiveness of Different Burnable Poisons in a Long Cycle BWR* | 3C |
| | Ishikawa, M. | *BN-600 Full MOX Core Benchmark Analysis* | 1C |
| | Ishikawa, Makoto | *Reduction of Cross-Section-Induced Errors of the BN-600 Hybrid Core Nuclear Parameters by Using BFS-62 Critical Experiment Data* | 4A |
| | Ivanov, Boyan D | *OECD/DOE/CEA VVER-1000 Coolant Transient (V1000CT) Benchmark for Assessing Coupled Neutronics/Thermal-Hydraulics System Codes for VVER-1000 RIA Analysis* | 7C |
| | Ivanov, Kostadin N. | *Automated Three Dimensional Depletion Capability for the Pennsylvania State University Research Reactor* | 3B |
| | Ivanov, Kostadin N. | *Coupled Neutronics-Thermalhydraulics Calculations for the Safety Analysis of the PBMR.* | 6B |
| | Ivanov, Kostadin N. | *Improving the Computation Efficiency of COBRA-TF for LWR Safety Analysis of Large Problems* | 6B |
| | Ivanov, Kostadin N. | *Design of Pebble-Bed Reactors Using a Genetic Algorithm* | 4A |
| | Ivanov, Kostadin N. | *Study of Nuclear Fuel Behavior with Coupled 3D Neutronics/Thermal-Hydraulic Codes* | 7C |
| | Ivanov, Kostadin N. | *Sensitivity Studies on Cross-Section Generation and Modeling for BWR Core Simulation Using SAPHYR Code System* | 1D |
| | Ivanov, Kostadin N. | *Uncertainty Evaluation of the Results of the MSLB Benchmark by CIAU Methodology* | 6B |
| | Ivanov, Kostadin N. | *Efficient Hybrid NEM/BEM Transient Method* | 6D |
| | Ivanov, Kostadin N. | *OECD/DOE/CEA VVER-1000 Coolant Transient (V1000CT) Benchmark for Assessing Coupled Neutronics/Thermal-Hydraulics System Codes for VVER-1000 RIA Analysis* | 7C |
| | Ivanov, Kostadin N. | *Modeling of Existing Beam-Port Facility at PSU Breazeale Reactor by Using MCNP* | 7D |
| | Ivanov, Kostadin N. | *Optimal Moderation in the Pebble-Bed Reactor for Enhanced Passive Safety and Improved Fuel Utilization* | 5B |
| | Iwasaki, Tomohiko | *Activities of Working Party on 'Subcritical Core of Accelerator-Driven System' in the Research Committee on Reactor Physics of AESJ and JAERI* | 6A |
| **J** | Jain, Rachna | *Feasibility Issues in the Mixed Spectrum Supercritical Water Reactor* | 6A |
| | Jammes, Christian | *Some Experimental Results from the Last Phases of the MUSE Program* | 5C |
| | Jasiulevicius, Audrius | *The Studies of RBMK-1500 Reactor Core Behavior during Abnormal Operation Transients* | 4A |
| | Jatuff, Fabian | *Reactivity and Neutron Emission Measurements of Burnt PWR Fuel Rod Samples in LWR-PROTEUS Phase II* | 8A |
| | Jatuff, Fabian | *Experimental Validation of Pin Power Distributions for a BWR Assembly with Hafnium Control Blades* | 6C |
| | Jean-Michel, RUGGIERI | *A New Method for the Treatment of Strong Local Heterogeneities and Its Application to the PHEBUS Experimental Facility* | 5D |
| | Jenkins, Dave | *Reactor Core Simulations in Canada* | 5D |
| | Jerez, Rogerio | *The Experimental Determination of the Effective Delayed Neutron Parameters: Beff, Beff/LAMBDA and LAMBDA of the IPEN/MB-01 Reactor* | 1C |
| | Jerez, Rogerio | *The Experimental Determination of the Relative Abundances and Decay Constants of Delayed Neutrons of the IPEN/MB-01 Reactor* | 1C |
| | Jevremovic, Tatjana | *Radiation Shielding Estimates for Interplanetary Manned Missions* | 4A |
| | Jevremovic, Tatjana | *AGENT Code: Open-Architecture Analysis and Configuration of Research Reactors – Graphic Tools* | 4A |
| | Jevremovic, Tatjana | *AGENT Code: Open-Architecture Analysis and Configuration of Research Reactors – Numerical Examples* | 7D |
| | Joo, Han Gyu | *Methods and Performance of a Three-Dimensional Whole-Core Transport Code DeCART* | 1A |
| | Joo, Han Gyu | *Consistent Comparison of Monte Carlo and Whole-Core Transport Solutions for Cores with Thermal Feedback* | 1A |
| | Joo, Hyung-Kook | *Development of an Object Oriented Nodal Code using the Refined AFEN Derived from the Method of Component Decomposition* | 8D |
| | Jun, Byung Jin | *The Application of the Zr to the Thermal Neutron Fluence Monitoring at the Irradiation Experiments of the Research Reactor* | 3B |
| **K** | Kadi, Yacine | *The TRADE Experiment: Status of the Project and Physics of the Spallation Target* | 2B |
| | Kadi, Yacine | *The TRADE Experiment: Importance of Neutron Cross-Sections for Transmutation* | 8B |
| | Kalcheva, Silva | *Reactivity Effects due to the Beryllium Poisoning of BR2 - MCNP Calculations* | 8A |
| | Kanda, Akiko | *Analysis of the Experimental Program MISTRAL Using CASMO-4* | 3D |
| | Kannan, Umasankari | *Studies of Advanced Fuel Cycles in Indian PHWRs and AHWR* | 3C |
| | Karancevic, Nick | *UIUC's Contribution to Big-10's INIE Project* | 7D |
| | Karni, Yonathan | *On the Capability of SMORES to Account for Self-Shielding in Search for Maximum keff* | 8A |
| | Karve, Atul | *Diagnostic Tool for Assessing Anomalous Trends in BWR Core Tracking* | 2D |
| | Kazimi, Mujid | *Modeling the MIT Reactor Neutronics for LEU Conversion Studies* | 3B |
| | Keinert, Juergen | *Scattering Law Data for Graphite in Gas Cooled High Temperature Reactors* | 7B |
| | Kiim, Sang | *Analysis of SNEAK-7A & 7B Critical Benchmarks using3-D Deterministic Transport and Sensitivity* | 4A |
| | Kim, Chang Hyo | *Consistent Comparison of Monte Carlo and Whole-Core Transport Solutions for Cores with Thermal Feedback* | 1A |
| | Kim, Heonil | *The Application of the Zr to the Thermal Neutron Fluence Monitoring at the Irradiation Experiments of the Research Reactor* | 3B |



| | Author | Title | Session |
|---|---|---|---|
| | Kim, Jong Kyung | *Feasibility of Using Burnable Poisons for Reduction of Coolant Void Reactivity in LMR for TRU Transmutation* | 4A |
| | Kim, Kang Seog | *Methods and Performance of a Three-Dimensional Whole-Core Transport Code DeCART* | 1A |
| | Kim, Kyo Youn | *Consistent Comparison of Monte Carlo and Whole-Core Transport Solutions for Cores with Thermal Feedback* | 1A |
| | Kim, Myong Seop | *The Application of the Zr to the Thermal Neutron Fluence Monitoring at the Irradiation Experiments of the Research Reactor* | 3B |
| | Kim, Sang Ji | *A Core Design for a Single Fuel Enrichment in a Self-Sustaining Lead-Cooled Reactor* | 6A |
| | Kim, Taek Kyum | *Assessment of Reduced Moderation Water Reactor Fuel Cycle* | 3C |
| | Kim, Taek Kyum | *Feasibility Issues in the Mixed Spectrum Supercritical Water Reactor* | 6A |
| | Kim, Taek Kyum | *Benchmark Comparisons of Deterministic and Monte Carlo Codes for a PWR Heterogeneous Assembly Design* | 3D |
| | Kim, Y. I. | *BN-600 Full MOX Core Benchmark Analysis* | 1C |
| | Kim, Yong Hee | *A Core Design for a Single Fuel Enrichment in a Self-Sustaining Lead-Cooled Reactor* | 6A |
| | Kim, Yong Hee | *Numerical Convergence Analysis of the Nonlinear CMFD Method for Three-Dimensional Two-Group LWR Diffusion Problems* | 6D |
| | Kim, Yong Nam | *Feasibility of Using Burnable Poisons for Reduction of Coolant Void Reactivity in LMR for TRU Transmutation* | 4A |
| | Kitada, Takanori | *Analysis of Benchmark Results for Reactor Physics of LWR Next Generation Fuels* | 1C |
| | Kitamura, Yasunori | *Improvement of the SPH Method for Multi-Assembly Calculations* | 1D |
| | Kitamura, Yasunori | *Derivation of the Space and Energy Dependent Formula for the Third Order Neutron Correlation Technique* | 4A |
| | Klann, Raymond | *OSMOSE: An Experimental Program for the Qualification of Integral Cross Sections of Actinides* | 1A |
| | Klann, Raymond | *MINERVE Reactor Characterization in Support of the OSMOSE Program: Spectral Indices* | 1A |
| | Klann, Raymond | *MINERVE Reactor Characterization in Support of the OSMOSE Program: Safety Parameters* | 4A |
| | Klein, Jean-Christophe | *GT-MHR Core Modelling: From Reference Modelling Definition in Monte-Carlo Code to Calculation Scheme Validation* | 5B |
| | Klein, Jean-Christophe | *HTGR Actinide Burner Feasibility Studies: Calculation Scheme Related Considerations* | 2A |
| | Klingensmith, Jesse | *Solutions to the New C5G7MOX Three-Dimensional Transport Benchmarks Using the TORT Code* | 3D |
| | Kloosterman, Jan Leen | *Fuel Design and Core Layout for a Gas Cooled Fast Reactor* | 5B |
| | Kloosterman, Jan Leen | *DELPHI:A New Subcritical Assembly at Delft University of Technology* | 4A |
| | Kloosterman, Jan Leen | *Variance Reduction Techniques for the Monte Carlo Simulation of Neutron Noise Measurements* | 1B |
| | Kobayashi, Keiji | *Criticality Analysis of Highly Enriched Uranium / Thorium Fueled Thermal Spectrum Cores of Kyoto University Critical Assembly* | 5C |
| | Koberl, Oliver | *HTGR Actinide Burner Feasibility Studies: Calculation Scheme Related Considerations* | 2A |
| | Koclas, Jean | *3D Characteristics Method with Linearly Anisotropic Scattering* | 1D |
| | Koclas, Jean | *New Computational Methodology for Large 3D Neutron Transport Problems* | 5A |
| | Koclas, Jean | *Reactor Core Simulations in Canada* | 5D |
| | Koclas, Jean | *CANDU Reactor Simulations with a Full P1 Method* | 4A |
| | Kodeli, Ivo | *Generation and Performance of a Multigroup Coupled Neutron-Gamma Cross-Section Library for Deterministic and Monte Carlo Borehole Logging Analysis* | 8B |
| | Kodeli, Ivo | *Analysis of SNEAK-7A & 7B Critical Benchmarks using3-D Deterministic Transport and Sensitivity* | 4A |
| | Kodochigov, N. | *Possibility to Use Different Fuel Cycles in GT-MHR* | 5B |
| | Koehler, Paul E. | *New Neutron Cross Section Measurements at ORELA for Improved Nuclear Data* | 7B |
| | Kolev, Nikola | *OECD/DOE/CEA VVER-1000 Coolant Transient (V1000CT) Benchmark for Assessing Coupled Neutronics/Thermal-Hydraulics System Codes for VVER-1000 RIA Analysis* | 7C |
| | Koonen, Edgar | *Determination of the Linear Power in MOX Fuel Rods Irradiated at BR2* | 3B |
| | Koonen, Edgar | *Reactivity Effects due to the Beryllium Poisoning of BR2 - MCNP Calculations* | 8A |
| | Kovalishin, Aleksey, Sr. | *On the Influence of Differences Between Various Group Microconstant Libraries and Between Different Transport Options on Calculation Results for Cells and Subassemblies of VVER-1000 Reactor* | 4A |
| | Kozier, Ken | *Qualification of MCNP Coolant Void Reactivity Calculations using ZED-2 Measurements* | 8C |
| | Kozlowski, Tomasz | *The Implementation of Pin-Cell Discontinuity Factors in PARCS Using an Artificial Neural Network with Application to MOX Fuel Analysis* | 2D |
| | Krishnani, P. D. | *Studies of Advanced Fuel Cycles in Indian PHWRs and AHWR* | 3C |
| | Kryuchkov, Eduard | *A Study on High-Intensity Radiation Protection of MOX-Fuel Doped with 231Pa and 137Cs* | 8A |
| | Kubarev, Andrej | *The Studies of RBMK-1500 Reactor Core Behavior during Abnormal Operation Transients* | 4A |
| | Kudo, Kazuhiko | *Criticality Analysis of Highly Enriched Uranium / Thorium Fueled Thermal Spectrum Cores of Kyoto University Critical Assembly* | 5C |
| | Kuijper, Jim C. | *HTR-N Plutonium Cell Burnup Benchmark: Definition, Results & Intercomparison* | 1A |
| | Kulik, Viktoriya V. | *Applications of Modal-Local Analysis for Source-Driven Subcritical Systems* | 8D |
| | Kulikov, Gennady Genrikhovich | *High Fuel Burn-up and Nonproliferation in PWR-type Reactor on the Basis of Modified U- and Th-fuels* | 5A |
| | Kumar, Arvind | *Studies of Advanced Fuel Cycles in Indian PHWRs and AHWR* | 3C |
| | Kuzavkov, N. | *Concept of a Gas Cooled Fast Reactor* | 4A |
| L | Labella, Rocco | *Uncertainty Analysis and Optimization Studies on the Deep-Burner Modular Helium Reactor (DB-MHR) for Actinide Incineration* | 2A |
| | Labella, Rocco | *Monte-Carlo Techniques to Simulate Pebble Dislocations in a PB-MR during Depletion* | 4A |
| | Laletin, Nickolay Ilyich | *About Axial Diffusion Coefficient Calculation Analysis* | 1D |



| | Author | *Title* | Session |
|---|---|---|---|
| | Laletin, Nickolay Ilyich | *On the Influence of Differences Between Various Group Microconstant Libraries and Between Different Transport Options on Calculation Results for Cells and Subassemblies of VVER-1000 Reactor* | 4A |
| | Langenbuch, Siegfried | *Uncertainty and Sensitivity Analysis Applied to Coupled Code Calculations for a VVER Plant Transient* | 7C |
| | Langenbuch, Siegfried | *Solution of the C5G7 3-D Extension Benchmark by the SN Code TORT* | 3D |
| | Larsen, Edward W. | *A Comparison of Binary Stochastic Media Transport Models in 'Solid-Void' Mixtures* | 8D |
| | Lathouwers, Danny | *Towards an Improved GELINA Neutron Target* | 2B |
| | Lathouwers, Danny | *Passive Decay Heat Removal in a Fluidized Bed Nuclear Reactor* | 7A |
| | Laulan, Olivier | *Molten Salt Reactors and Possible Scenarios for Future Nuclear Power Deployment* | 7A |
| | Laurens, Jean-Marc | *Reactivity Measurements and Neutron Spectrometry in the MUSE-4 Experiment* | 5C |
| | Laval, Valerie | *MINERVE Reactor Characterization in Support of the OSMOSE Program: Spectral Indices* | 1A |
| | Laval, Valerie | *MINERVE Reactor Characterization in Support of the OSMOSE Program: Safety Parameters* | 4A |
| | Le Brun, Christian | *Reactivity Measurements and Neutron Spectrometry in the MUSE-4 Experiment* | 5C |
| | Le Brun, Christian | *Molten Salt Reactors and Possible Scenarios for Future Nuclear Power Deployment* | 7A |
| | Le Tellier, Romain | *Application of the DSA Preconditioned GMRES Formalism to the Method of Characteristics - First Results* | 1D |
| | Leal, Luiz C. | *An Unresolved Resonance Evaluation for U-235* | 7B |
| | Leal, Luiz C. | *New Neutron Cross Section Measurements at ORELA for Improved Nuclear Data* | 7B |
| | Leal, Luiz C. | *Effect of Energy Self-Shielding on Reactor Benchmark Problems* | 8B |
| | Lebrat, Jean-François | *Some Experimental Results from the Last Phases of the MUSE Program* | 5C |
| | Lebrat, Jean-François | *Reactivity Assessment and Spatial Time-Effects from the MUSE Kinetics Experiments* | 3A |
| | Leconte, Pierre | *MINERVE Reactor Characterization in Support of the OSMOSE Program: Safety Parameters* | 4A |
| | Lee, Byung Chul | *The Application of the Zr to the Thermal Neutron Fluence Monitoring at the Irradiation Experiments of the Research Reactor* | 3B |
| | Lee, Chung Chan | *Methods and Performance of a Three-Dimensional Whole-Core Transport Code DeCART* | 1A |
| | Lee, Deokjung | *Convergence Analysis of 2-D/1-D Coupling Strategies for Diffusion Equation* | 6D |
| | Lee, Deokjung | *Numerical Convergence Analysis of the Nonlinear CMFD Method for Three-Dimensional Two-Group LWR Diffusion Problems* | 6D |
| | Lee, Deokjung | *The Implementation of Pin-Cell Discontinuity Factors in PARCS Using an Artificial Neural Network with Application to MOX Fuel Analysis* | 2D |
| | Lee, Eun-Ki | *Application of the Dynamic Control Rod Reactivity Measurement Method to Korea Standard Nuclear Power Plants* | 3A |
| | Lee, Gil Soo | *An Approach of Super-Element Sweeping for the Solution of Neutron Transport Equation in Heterogeneous Geometry* | 6D |
| | Lee, Hyun Chul | *Convergence Analysis of 2-D/1-D Coupling Strategies for Diffusion Equation* | 6D |
| | Lee, Hyun Chul | *AGENT Code: Open-Architecture Analysis and Configuration of Research Reactors – Numerical Examples* | 7D |
| | Lee, John | *Applications of Modal-Local Analysis for Source-Driven Subcritical Systems* | 8D |
| | Lee, K. B. | *BN-600 Full MOX Core Benchmark Analysis* | 1C |
| | Lee, Yong-Kwan | *Application of the Dynamic Control Rod Reactivity Measurement Method to Korea Standard Nuclear Power Plants* | 3A |
| | Legrady, David | *Monte Carlo Midway Forward-Adjoint Coupling with Legendre Polynomials for Borehole Logging Applications* | 4A |
| | Legrady, David | *Generation and Performance of a Multigroup Coupled Neutron-Gamma Cross-Section Library for Deterministic and Monte Carlo Borehole Logging Analysis* | 8B |
| | Legrady, David | *Visualization of Space-Dependency of Responses of Monte Carlo Calculations Using Legendre Polynomials* | 4A |
| | Lepki, Vladimir | *Research Reactor Application to Iridium-192 Production for Cancer Treatment* | 2C |
| | Lewis, Elmer E. | *The Variational Nodal Method in R-Z Geometry* | 5D |
| | Lewis, Elmer E. | *A First-Order Spherical Harmonics Formulation Compatible with the Variational Nodal Transport Method* | 5D |
| | Lewis, Elmer E. | *Mixed-Hybrid Methods for the Linear Transport Equation* | 5D |
| | Li, Z. H. | *BN-600 Full MOX Core Benchmark Analysis* | 1C |
| | Liatard, Eric | *Molten Salt Reactors and Possible Scenarios for Future Nuclear Power Deployment* | 7A |
| | Liatard, Eric | *Reactivity Measurements and Neutron Spectrometry in the MUSE-4 Experiment* | 5C |
| | Litaize, Olivier | *Monte Carlo Analysis of High Moderation 100% MOX BWR Cores using JEF2 and JENDL3 Nuclear Data* | 6C |
| | Liu, Zhihong | *Probability Approaching Method (PAM) and Its Application on Fuel Management Optimization* | 5A |
| | Loaiza, David J. | *Creation of a Simplified Benchmark Model for the Neptunium Sphere Experiment* | 3D |
| | Loiseaux, Jean-Marie | *Reactivity Measurements and Neutron Spectrometry in the MUSE-4 Experiment* | 5C |
| | Loiseaux, Jean-Marie | *Molten Salt Reactors and Possible Scenarios for Future Nuclear Power Deployment* | 7A |
| | Longoni, Gianluca | *The Simplified Even-Parity SN Equations Applied to a MOX Fuel Assembly Benchmark Problem on Distributed Memory Environments* | 4A |
| | Loubière, Stéphane | *HORUS3D Code Package Development and Validation for the JHR Modeling* | 6D |
| | Lucas, D. Scott | *Investigating the Use of 3-D Deterministic Transport for Core Safety Analysis* | 5D |
| M | Macian, Rafael | *Assessment of CASMO-4 Predictions of the Isotopic Inventory of High Burn-up MOX Fuel* | 6C |
| | Macian, Rafael | *Uncertainty Analysis Applied to Fuel Depletion Calculations* | 6C |
| | Maggini, Francesca | *Peach Bottom-2 Low-Flow Stability Test using Trac-Bf1/Valkin and Relap5-Mod.3.3/Parcs Codes* | 6B |



| | Author | Title | Session |
|---|---|---|---|
| | Mai, Luis Antonio | *The Experimental Determination of the Relative Abundances and Decay Constants of Delayed Neutrons of the IPEN/MB-01 Reactor* | 1C |
| | Maiorino, José Rubens | *The Utilization of Small Accelerators to Drive a Zero Power Sub Critical Reactor. A Review of R&D at IPEN-CNEN and IFUSP* | 2B |
| | Malofeev, Valery | *Effect of Spatial Power Distribution during Reactivity Initiated Accidents in a PWR* | 6B |
| | Mandard, Laurence | *The TRADE Source Multiplication Experiments* | 5C |
| | Mandard, Laurence | *Benchmark Comparisons of Deterministic and Monte Carlo Codes for a PWR Heterogeneous Assembly Design* | 3D |
| | Manturov, Gennadi | *Reduction of Cross-Section-Induced Errors of the BN-600 Hybrid Core Nuclear Parameters by Using BFS-62 Critical Experiment Data* | 4A |
| | Manturov, Gennadi | *Uncertainty Analysis Results on BN-600 Hybrid Core Nuclear Physics Characteristics* | 4A |
| | Marleau, Guy | *CANDU Adjuster Rods Incremental Cross Sections Evaluation: A Perturbative Approach* | 3A |
| | Marova, E. | *Possibility to Use Different Fuel Cycles in GT-MHR* | 5B |
| | Martin, Gumersindo Verdu | *Peach Bottom-2 Low-Flow Stability Test using Trac-Bf1/Valkin and Relap5-Mod.3.3/Parcs Codes* | 6B |
| | Martin, William R. | *Continuously Varying Material Properties and Tallies for Monte Carlo Calculations* | 1B |
| | Martin, William R. | *Two Dimensional Functional Expansion Tallies for Monte Carlo Simulations* | 1B |
| | Maschek, Werner | *Source and Reactivity Perturbations in Accelerator Driven Systems with Conventional MOX and Advanced Fertile Free Fuel* | 7C |
| | Mathieu, Ludovic | *Molten Salt Reactors and Possible Scenarios for Future Nuclear Power Deployment* | 7A |
| | Matsumoto, Hideki | *Effect of Pellet Radial Power and Temperature Distribution on Fuel Assembly Neutronics* | 8D |
| | Matsumoto, Hideki | *Spatially and Temperature Dependent Dancoff Method for LWR Lattice Physics Code* | 8C |
| | Mattes, Margarete | *Scattering Law Data for Graphite in Gas Cooled High Temperature Reactors* | 7B |
| | Mazzolo, Alain | *GT-MHR Core Modelling: From Reference Modelling Definition in Monte-Carlo Code to Calculation Scheme Validation* | 5B |
| | McGhee, John | *Investigating the Use of 3-D Deterministic Transport for Core Safety Analysis* | 5D |
| | McKinney, Gregg | *Eigenfunction Convergence and Transmutation Enhancements in MCNPX* | 1B |
| | Mechitoua, Boukhmes | *Simulations of Caliban Fast Pulsed Reactor Burst Wait Time Distribution using PANDA* | 7A |
| | Mellier, Frederic | *Some Experimental Results from the Last Phases of the MUSE Program* | 5C |
| | Meplan, Olivier | *Molten Salt Reactors and Possible Scenarios for Future Nuclear Power Deployment* | 7A |
| | Meplan, Olivier | *Reactivity Measurements and Neutron Spectrometry in the MUSE-4 Experiment* | 5C |
| | Merle-Lucotte, Elsa | *Reactivity Measurements and Neutron Spectrometry in the MUSE-4 Experiment* | 5C |
| | Merle-Lucotte, Elsa | *Molten Salt Reactors and Possible Scenarios for Future Nuclear Power Deployment* | 7A |
| | Messaoudi, Nadia | *OECD/NEA International Benchmark on 3-D VENUS-2 MOX Core Measurements* | 1C |
| | Meulekamp, Robin Klein | *Calculation of the Effective Delayed Neutron Fraction Using Monte Carlo Techniques* | 1B |
| | Michelotti, Alberto | *Uncertainty Analysis on Back-end Fuel Cycle Main Parameters* | 3C |
| | Michel-Sendis , Franco | *Molten Salt Reactors and Possible Scenarios for Future Nuclear Power Deployment* | 7A |
| | Micklich, Bradley | *MINERVE Reactor Characterization in Support of the OSMOSE Program: Spectral Indices* | 1A |
| | Micklich, Bradley | *MINERVE Reactor Characterization in Support of the OSMOSE Program: Safety Parameters* | 4A |
| | Mikityuk, Konstantin | *TRAC-M/AAA Code Assessment for Transient Analysis of Pb-Bi Cooled Fast-Spectrum Reactor Systems* | 7C |
| | Mimatsu, Junji | *Reduced Moderation BWR with Advanced Recycle System (BARS)* | 6A |
| | Miró, Rafael | *Peach Bottom-2 Low-Flow Stability Test using Trac-Bf1/Valkin and Relap5-Mod.3.3/Parcs Codes* | 6B |
| | Misawa, Tsuyoshi | *Criticality Analysis of Highly Enriched Uranium / Thorium Fueled Thermal Spectrum Cores of Kyoto University Critical Assembly* | 5C |
| | Mittag, Siegfried | *Comparisons of DYN3D Calculations with Measurements at the V-1000 Test Facility* | 8C |
| | Miyoshi, Yoshinori | *Validation of Integrated Burnup Code System SWAT2 by the Analysis of Isotopic Composition Data of Spent Nuclear Fuel* | 6C |
| | Mochizuki, Hiroki | *Validation of Integrated Burnup Code System SWAT2 by the Analysis of Isotopic Composition Data of Spent Nuclear Fuel* | 6C |
| | Mohanakrishnan, P. | *BN-600 Full MOX Core Benchmark Analysis* | 1C |
| | Mondelaers, Willy | *Towards an Improved GELINA Neutron Target* | 2B |
| | Monti, Stefano | *The TRADE Experiment: Status of the Project and Physics of the Spallation Target* | 2B |
| | Moon, Hoju | *ALAADIN/FLS - A BWR Fast Lattice Design Simulation Tool* | 5A |
| | Mori, Masaaki | *Development of Hybrid Core Calculation System Using 2-D Full-Core Heterogeneous Transport Calculation and 3-D Advanced Nodal Calculation* | 5D |
| | Mori, Takamasa | *Analysis of the HTR-10 Initial Core with a Monte Carlo Code MVP* | 1C |
| | Mosher, Scott W. | *Application of a Heterogeneous Coarse Mesh Transport Method to a MOX Benchmark Problem* | 2D |
| | Mosteller, Russell D. | *An Assessment of ENDF/B-VI Releases Using the MCNP Criticality Validation Suite* | 8B |
| | Mosteller, Russell D. | *ENDF/B-V and ENDF/B-VI Calculations for the LWBR SB Core Benchmarks with MCNP5* | 3D |
| | Mosteller, Russell D. | *Creation of a Simplified Benchmark Model for the Neptunium Sphere Experiment* | 3D |
| | Mphahlele, Ramatsemela | *Optimal Moderation in the Pebble-Bed Reactor for Enhanced Passive Safety and Improved Fuel Utilization* | 5B |
| | Mukerji, Sadhana | *Studies of Advanced Fuel Cycles in Indian PHWRs and AHWR* | 3C |
| | Mulder, Eben J. | *Plutonium Disposition in the PBMR-400 High-Temperature Gas-Cooled Reactor* | 4A |
| | Murphy, Michael F. | *Reactivity and Neutron Emission Measurements of Burnt PWR Fuel Rod Samples in LWR-PROTEUS Phase II* | 8A |
| **N** | Na, Byung-Chan | *OECD/NEA International Benchmark on 3-D VENUS-2 MOX Core Measurements* | 1C |
| | Naberejnev, Dmitri G. | *The TRADE Source Multiplication Experiments* | 5C |



| | Author | Title | Session |
|---|---|---|---|
| | Nagaya, Yasunobu | *Analysis of the HTR-10 Initial Core with a Monte Carlo Code MVP* | 1C |
| | Nainer, Ovidiu | *Bruce 'B' Core Conversion* | 6B |
| | Nakajima, Ken | *Analysis of Criticality Change with Time for MOX Cores* | 5C |
| | Nakajima, Tetsuo | *Analysis of the Experimental Program MISTRAL Using CASMO-4* | 3D |
| | Nakamura, Hiroshi | *Criticality Analysis of Highly Enriched Uranium / Thorium Fueled Thermal Spectrum Cores of Kyoto University Critical Assembly* | 5C |
| | Nakazato, Wataru | *Analysis of the HTR-10 Initial Core with a Monte Carlo Code MVP* | 1C |
| | Nevinitsa, Vladimir A. | *Studies of Physical Features of Cascade Subcritical Molten Salt Reactor with External Neutron Source* | 7A |
| | Newton, Thomas H., Jr. | *Modeling the MIT Reactor Neutronics for LEU Conversion Studies* | 3B |
| | Newton, Tim | *Validation of WIMS9* | 1D |
| | Newton, Tim | *BN-600 Full MOX Core Benchmark Analysis* | 1C |
| | Newton, Tim | *Safety Characteristics of Candidate Oxide Fuels for Accelerator Driven Transmuters* | 7C |
| | Niederhaus, John | *Thermal Neutron Time-of-Flight Spectroscopy at Penn State using a Single-Disk Chopper* | 7D |
| | Noël, Brigitte | *HORUS3D Code Package Development and Validation for the JHR Modeling* | 6D |
| | Noh, Jae Man | *Development of an Object Oriented Nodal Code using the Refined AFEN Derived from the Method of Component Decomposition* | 8D |
| | Nuttin, Alexis | *Reactivity Measurements and Neutron Spectrometry in the MUSE-4 Experiment* | 5C |
| | Nuttin, Alexis | *Molten Salt Reactors and Possible Scenarios for Future Nuclear Power Deployment* | 7A |
| O | Oberstedt, Andreas | *Measurement and Calculation of the 233Pa Fission Cross-Section for Advanced Fuel Cycles* | 7B |
| | Oberstedt, Stephan | *Measurement and Calculation of the 233Pa Fission Cross-Section for Advanced Fuel Cycles* | 7B |
| | Ognerubov, Viktor | *The Studies of RBMK-1500 Reactor Core Behavior during Abnormal Operation Transients* | 4A |
| | Oh, Soo-Youl | *Box-Cox Transformation for Resolving the Peelle's Pertinent Puzzle in a Curve Fitting* | 8B |
| | Oigawa, Hiroyuki | *Research and Development Activities for Accelerator Driven System at JAERI* | 2B |
| | Okajima, Shigeaki | *Subcritical Experiments in Uranium-Fueled Core with Central Test Zone of Tungsten* | 5C |
| | Okumura, Keisuke | *Analysis of the HTR-10 Initial Core with a Monte Carlo Code MVP* | 1C |
| | Okumura, Keisuke | *Analysis of Benchmark Results for Reactor Physics of LWR Next Generation Fuels* | 1C |
| | Okuno, Hiroshi | *Validation of Integrated Burnup Code System SWAT2 by the Analysis of Isotopic Composition Data of Spent Nuclear Fuel* | 6C |
| | Orsi, Roberto | *Solutions to the New C5G7MOX Three-Dimensional Transport Benchmarks Using the TORT Code* | 3D |
| | Ougouag, Abderrafi | *Design of Pebble-Bed Reactors Using a Genetic Algorithm* | 4A |
| | Ougouag, Abderrafi | *Displacement Kerma Cross Sections for Neutron Interactions in Molybdenum* | 2C |
| | Ougouag, Abderrafi M. | *Optimal Moderation in the Pebble-Bed Reactor for Enhanced Passive Safety and Improved Fuel Utilization* | 5B |
| | Ouisloumen, Mohamed | *Effect of Pellet Radial Power and Temperature Distribution on Fuel Assembly Neutronics* | 8D |
| | Ouisloumen, Mohamed | *Spatially and Temperature Dependent Dancoff Method for LWR Lattice Physics Code* | 8C |
| P | Padovani, Enrico | *Uncertainty Analysis on Back-end Fuel Cycle Main Parameters* | 3C |
| | Pain, Chris | *Passive Decay Heat Removal in a Fluidized Bed Nuclear Reactor* | 7A |
| | Palmer, Todd S. | *A Comparison of Binary Stochastic Media Transport Models in 'Solid-Void' Mixtures* | 8D |
| | Palmiotti, Giuseppe | *The TRADE Source Multiplication Experiments* | 5C |
| | Palmiotti, Giuseppe | *Irradiation Experiment Analysis for Cross Section Validation* | 8D |
| | Palmiotti, Giuseppe | *A First-Order Spherical Harmonics Formulation Compatible with the Variational Nodal Transport Method* | 5D |
| | Palmiotti, Giuseppe | *Reactivity Assessment and Spatial Time-Effects from the MUSE Kinetics Experiments* | 3A |
| | Panayotov, Dobromir | *POLCA-T Simulation of OECD/NRC BWR Turbine Trip Benchmark Exercise 3 Best Estimate Scenario TT2 Test and Four Extreme Scenarios* | 6B |
| | Parisi, Carlo | *Study of Nuclear Fuel Behavior with Coupled 3D Neutronics/Thermal-Hydraulic Codes* | 7C |
| | Park, Donghwan | *Benchmark Calculation of WIMS/RFSP against Wolsong Nuclear Power Plants 3 and 4 Physics Measurement Data* | 8C |
| | Park, Sang Jun | *The Application of the Zr to the Thermal Neutron Fluence Monitoring at the Irradiation Experiments of the Research Reactor* | 3B |
| | Park, Won Seok | *Feasibility of Using Burnable Poisons for Reduction of Coolant Void Reactivity in LMR for TRU Transmutation* | 4A |
| | Parks, Geoffrey T. | *The TRADE Experiment: Importance of Neutron Cross-Sections for Transmutation* | 8B |
| | Pazsit, Imre | *On-line Determination of the Prompt Fraction of In-Core Neutron Detectors in CANDU Reactors* | 4A |
| | Pelloni, Sandro | *PDS-XADS LBE and Gas-Cooled Concepts: Neutronic Parameters Comparison* | 6A |
| | Peluso, Vincenzo | *Reactivity Assessment and Spatial Time-Effects from the MUSE Kinetics Experiments* | 3A |
| | Peng, Yefei | *AGENT Code: Open-Architecture Analysis and Configuration of Research Reactors – Numerical Examples* | 7D |
| | Perdu, Fabien | *Reactivity Measurements and Neutron Spectrometry in the MUSE-4 Experiment* | 5C |
| | Pereira, Sérgio Anéfalos | *The Utilization of Small Accelerators to Drive a Zero Power Sub Critical Reactor. A Review of R&D at IPEN-CNEN and IFUSP* | 2B |
| | Perret, Gregory | *MINERVE Reactor Characterization in Support of the OSMOSE Program: Spectral Indices* | 1A |
| | Perret, Gregory | *MINERVE Reactor Characterization in Support of the OSMOSE Program: Safety Parameters* | 4A |
| | Perry, Ray | *Validation of WIMS9* | 1D |
| | Petrie, L. M. | *Point KENO V.a: A Continuous-Energy Monte Carlo Code for Criticality Safety Applications* | 1B |
| | Petruzzi, Alessandro | *Uncertainty Evaluation of the Results of the MSLB Benchmark by CIAU Methodology* | 6B |
| | Pilat, Edward E. | *Modeling the MIT Reactor Neutronics for LEU Conversion Studies* | 3B |
| | Pilat, Edward E. | *Effectiveness of Different Burnable Poisons in a Long Cycle BWR* | 3C |



| | Author | Title | Session |
|---|---|---|---|
| | Pisacane, Fabrizio | *The TRADE Experiment: Status of the Project and Physics of the Spallation Target* | 2B |
| | Pitcher, Eric | *The TRADE Experiment: Status of the Project and Physics of the Spallation Target* | 2B |
| | Plompen, Arjan | *Towards an Improved GELINA Neutron Target* | 2B |
| | POINOT, Christine | *GT-MHR Core Modelling: From Reference Modelling Definition in Monte-Carlo Code to Calculation Scheme Validation* | 5B |
| | Poinot, Christine | *Neutronic Modeling for a Gas-Cooled Fast Reactor Assuming Coated Fuel Particles* | 5B |
| | Poinot, Christine | *French Calculation Schemes for Light Water Reactor Analysis* | 8D |
| | Ponomarev-Stepnov, N. | *Possibility to Use Different Fuel Cycles in GT-MHR* | 5B |
| | Ponsard, Bernard | *Reactivity Effects due to the Beryllium Poisoning of BR2 - MCNP Calculations* | 8A |
| | Pothet, Baptiste | *Neutronic Modeling for a Gas-Cooled Fast Reactor Assuming Coated Fuel Particles* | 5B |
| | Poveschenko, Tamara Semeonovna | *About Axial Diffusion Coefficient Calculation Analysis* | 1D |
| | Primm, R. Trent, III | *Safety Assessment of Reducing the Tantalum Content of High Flux Isotope Reactor Regulating and Safety Elements* | 3B |
| **R** | Rabiti, Cristian | *Extension of KIN3D, a Kinetics Capability of VARIANT, for Modeling Fast Transients in Accelerator Driven Systems* | 3A |
| | Raepsaet, Xavier | *GT-MHR Core Modelling: From Reference Modelling Definition in Monte-Carlo Code to Calculation Scheme Validation* | 5B |
| | Raepsaet, Xavier | *HTGR Actinide Burner Feasibility Studies: Calculation Scheme Related Considerations* | 2A |
| | Ragusa, Jean C. | *Adaptative Solution of the Multigroup Diffusion Equation on Irregular Structured Grids Using a Non Conforming Finite Element Method Formulation* | 5D |
| | Rahnema, Farzad | *Application of a Heterogeneous Coarse Mesh Transport Method to a MOX Benchmark Problem* | 2D |
| | Ramirez-Sanchez, Jose Ramon | *Over-Moderated MOX Fuel Assembly in a BWR Mixed Reload* | 5A |
| | Ramstroem, Elisabet | *Measurement and Calculation of the 233Pa Fission Cross-Section for Advanced Fuel Cycles* | 7B |
| | Ravetto, Pieor | *Reactivity Assessment and Spatial Time-Effects from the MUSE Kinetics Experiments* | 3A |
| | Ravetto, Piero | *Efficient Hybrid NEM/BEM Transient Method* | 6D |
| | Ravetto, Piero | *On Some Features of Quasi-Static Schemes in Reactor Kinetics* | 6D |
| | Rea, John | *Diagnostic Tool for Assessing Anomalous Trends in BWR Core Tracking* | 2D |
| | Reitsma, Frederik | *The Pebble Bed Modular Reactor Layout and Neutronics Design of the Equilibrium Cycle* | 5B |
| | Rela, Paulo Roberto | *Research Reactor Application to Iridium-192 Production for Cancer Treatment* | 2C |
| | Ridikas, Danas | *Modeling of HTRs with Monte Carlo: Sensitivity due to Different Isotopic Fuel Composition* | 5B |
| | Rigaut, Emmanuel | *Sensitivity Studies on Cross-Section Generation and Modeling for BWR Core Simulation Using SAPHYR Code System* | 1D |
| | Rimpault, Gerald | *BN-600 Full MOX Core Benchmark Analysis* | 1C |
| | Rimpault, Gerald | *Methodology for a Large Gas-Cooled Fast Reactor Core Design and Associated Neutronic Uncertainties* | 5B |
| | Rineiski, Andrei | *Source and Reactivity Perturbations in Accelerator Driven Systems with Conventional MOX and Advanced Fertile Free Fuel* | 7C |
| | Rineiski, Andrei | *Extension of KIN3D, a Kinetics Capability of VARIANT, for Modeling Fast Transients in Accelerator Driven Systems* | 3A |
| | Rineiski, Andrei | *BN-600 Full MOX Core Benchmark Analysis* | 1C |
| | Rodriguez, Carmelo | *Uncertainty Analysis and Optimization Studies on the Deep-Burner Modular Helium Reactor (DB-MHR) for Actinide Incineration* | 2A |
| | Rostagno, Matteo | *Efficient Hybrid NEM/BEM Transient Method* | 6D |
| | Rostagno, Matteo M. | *On Some Features of Quasi-Static Schemes in Reactor Kinetics* | 6D |
| | Rostelato, Maria Elisa C. M. | *Research Reactor Application to Iridium-192 Production for Cancer Treatment* | 2C |
| | Roth, Paul A. | *Investigating the Use of 3-D Deterministic Transport for Core Safety Analysis* | 5D |
| | Rouben, Benjamin | *Reactor Core Simulations in Canada* | 5D |
| | Roy, Robert | *3D Characteristics Method with Linearly Anisotropic Scattering* | 1D |
| | Roy, Robert | *New Computational Methodology for Large 3D Neutron Transport Problems* | 5A |
| | Roy, Robert | *Reactor Core Simulations in Canada* | 5D |
| | Royer, Eric Denis | *Sensitivity Studies on Cross-Section Generation and Modeling for BWR Core Simulation Using SAPHYR Code System* | 1D |
| | Royer, Eric Denis | *OECD/DOE/CEA VVER-1000 Coolant Transient (V1000CT) Benchmark for Assessing Coupled Neutronics/Thermal-Hydraulics System Codes for VVER-1000 RIA Analysis* | 7C |
| | Rubbia, Carlo | *The TRADE Experiment: Status of the Project and Physics of the Spallation Target* | 2B |
| | Rugama, Yolanda | *Reactivity Measurements and Neutron Spectrometry in the MUSE-4 Experiment* | 5C |
| | Rugama, Yolanda | *Some Experimental Results from the Last Phases of the MUSE Program* | 5C |
| | Rugama, Yolanda | *Study of the Influence of a Pulsed Source in the Kinetics Measurements in a Subcritical System* | 5C |
| | Ryu, Suk-Jin | *Application of the Dynamic Control Rod Reactivity Measurement Method to Korea Standard Nuclear Power Plants* | 3A |
| **S** | Saji, Etsuro | *Analysis of Benchmark Results for Reactor Physics of LWR Next Generation Fuels* | 1C |
| | Salavy, Jean-François | *Neutronic Modeling for a Gas-Cooled Fast Reactor Assuming Coated Fuel Particles* | 5B |
| | Salvatores, Massimo | *Reactivity Assessment and Spatial Time-Effects from the MUSE Kinetics Experiments* | 3A |
| | Salvatores, Massimo | *The TRADE Experiment: Status of the Project and Physics of the Spallation Target* | 2B |
| | Salvatores, Massimo | *The Physics of TRU Transmutation -- A Systematic Approach to the Intercomparison of Systems* | 3C |
| | Sánchez, Ana María | *Peach Bottom-2 Low-Flow Stability Test using Trac-Bf1/Valkin and Relap5-Mod.3.3/Parcs Codes* | 6B |



| Author | Title | Session |
|---|---|---|
| Sanchez, Rene G. | *Creation of a Simplified Benchmark Model for the Neptunium Sphere Experiment* | 3D |
| Sanchez, Richard | *Method of Characteristics Applied to a MTR Whole Core Modeling* | 1D |
| Sanchez, Richard | *Renormalized Treatment of the Double Heterogeneity with the Method of Characteristics* | 2D |
| Sano, Kyoko | *Analysis of the Experimental Program MISTRAL Using CASMO-4* | 3D |
| Santagata, Alfonso | *Monte-Carlo Techniques to Simulate Pebble Dislocations in a PB-MR during Depletion* | 4A |
| Santagata, Alfonso | *The TRADE Experiment: Status of the Project and Physics of the Spallation Target* | 2B |
| Santamarina, Alain | *Monte Carlo Analysis of High Moderation 100% MOX BWR Cores using JEF2 and JENDL3 Nuclear Data* | 6C |
| Santamarina, Alain | *JEF2.2 nuclear data statistical adjustment using Post-Irradiation Experiments* | 7B |
| Santamarina, Alain | *Validation of Depletion Calculation through TAKAHAMA-3 Chemical Assays with JEFF3.0* | 1C |
| Santamarina, Alain | *French Calculation Schemes for Light Water Reactor Analysis* | 8D |
| Santandera, Simone | *GT-MHR Core Modelling: From Reference Modelling Definition in Monte-Carlo Code to Calculation Scheme Validation* | 5B |
| Santandrea, Simone | *Method of Characteristics Applied to a MTR Whole Core Modeling* | 1D |
| Santandrea, Simone | *An Algebraic Multgrid Resolution Strategy for the DPn Synthetic Acceleration Method* | 6D |
| Santos, Adimir dos | *The Experimental Determination of the Effective Delayed Neutron Parameters: Beff, Beff/LAMBDA and LAMBDA of the IPEN/MB-01 Reactor* | 1C |
| Santos, Adimir dos | *The Experimental Determination of the Relative Abundances and Decay Constants of Delayed Neutrons of the IPEN/MB-01 Reactor* | 1C |
| Sarikaya, Baris | *Modeling of Existing Beam-Port Facility at PSU Breazeale Reactor by Using MCNP* | 7D |
| Sartori, Enrico | *Analysis of SNEAK-7A & 7B Critical Benchmarks using3-D Deterministic Transport and Sensitivity* | 4A |
| Sasa, Toshinobu | *Research and Development Activities for Accelerator Driven System at JAERI* | 2B |
| Sayer, Royce O. | *New Neutron Cross Section Measurements at ORELA for Improved Nuclear Data* | 7B |
| Schneider, Erich | *Dynamic Analysis of the AFCI Scenarios* | 3C |
| Sedov, Aleksey A. | *Studies of Physical Features of Cascade Subcritical Molten Salt Reactor with External Neutron Source* | 7A |
| Sedov, Aleksey A. | *An Influence of Core Physics Peculiarities upon the Thermal Hydraulics Performance in Cascade Subcritical Molten Salt Reactor* | 4A |
| Sedov, Aleksey A. | *An Influence of Core Physics Peculiarities upon the Thermal Hydraulics Performance in Cascade Subcritical Molten Salt Reactor* | 4A |
| Seltborg, Per | *Impact of Heterogeneous Cm Distribution on Proton Source Efficiency in Accelerator-driven Systems* | 2B |
| Semenov, Mikhail | *Uncertainty Analysis Results on BN-600 Hybrid Core Nuclear Physics Characteristics* | 4A |
| Seregin, Anatoly | *Uncertainty Analysis Results on BN-600 Hybrid Core Nuclear Physics Characteristics* | 4A |
| Serviere, Hugues | *The Nuclear Heating Calculation Scheme for Material Testing in the Future Jules Horowitz Reactor* | 8C |
| Seubert, Armin | *Solution of the C5G7 3-D Extension Benchmark by the SN Code TORT* | 3D |
| Seveborn, Ola | *Enriched Gadolinium as Burnable Absorber for PWR* | 5A |
| Shayer, Zeev | *Spectral Shift Methodology for 'Deep-Burnup' of Uranium-Thorium-Hydride-Fuel* | 2A |
| Shayer, Zeev | *Physics Study on Direct Use of U-ZrH1.6 Fuel in PWR* | 3A |
| Shen, Wei | *Reactor Core Simulations in Canada* | 5D |
| Shin, Ho-Chul | *Application of the Dynamic Control Rod Reactivity Measurement Method to Korea Standard Nuclear Power Plants* | 3A |
| Shirai, Hiroshi | *Localized Void Feedback Effects Under Single Rod Drop Transient in BWR* | 6B |
| Shiraki, Takako | *Cascade Reactor Concept for Neutron Multiplication of Subcritical Core* | 2A |
| Shiroya, Seiji | *Criticality Analysis of Highly Enriched Uranium / Thorium Fueled Thermal Spectrum Cores of Kyoto University Critical Assembly* | 5C |
| Shmelev, Anatoly Nikolaevich | *High Fuel Burn-up and Nonproliferation in PWR-type Reactor on the Basis of Modified U- and Th-fuels* | 5A |
| Shojaei, Afshin | *Development of a Polynomial Nodal Model for the Multi Group Diffusion Equation in 2-D* | 8D |
| Shono, Akira | *Reduction of Cross-Section-Induced Errors of the BN-600 Hybrid Core Nuclear Parameters by Using BFS-62 Critical Experiment Data* | 4A |
| Sidorov, Victor | *Effect of Spatial Power Distribution during Reactivity Initiated Accidents in a PWR* | 6B |
| Silva, Constancia | *Research Reactor Application to Iridium-192 Production for Cancer Treatment* | 2C |
| Silva, Graciete S. A. | *The Experimental Determination of the Effective Delayed Neutron Parameters: Beff, Beff/LAMBDA and LAMBDA of the IPEN/MB-01 Reactor* | 1C |
| Singh, Baltej | *Studies of Advanced Fuel Cycles in Indian PHWRs and AHWR* | 3C |
| Slessarev, Igor | *The Physics of TRU Transmutation -- A Systematic Approach to the Intercomparison of Systems* | 3C |
| Smith, Micheal Addison | *A First-Order Spherical Harmonics Formulation Compatible with the Variational Nodal Transport Method* | 5D |
| Smith, Micheal Addison | *Neutronics Design Studies of a Lead Cooled, Small Modular Reactor* | 6A |
| Smith, Micheal Addison | *Physics and Safety Studies of a 0.25 Conversion Ratio Sodium Cooled Fast Reactor* | 6A |
| Smith, Peter | *Source and Reactivity Perturbations in Accelerator Driven Systems with Conventional MOX and Advanced Fertile Free Fuel* | 7C |
| Smith, Peter | *Safety Characteristics of Candidate Oxide Fuels for Accelerator Driven Transmuters* | 7C |
| Smith, Robert H. | *Validation of SCALE4.4a/CSAS25 for Nuclear Criticality Safety Analyses* | 8C |
| Smolinska, Anna | *Diagnostic Tool for Assessing Anomalous Trends in BWR Core Tracking* | 2D |
| Sofu, Tanju | *Methodology for Coupling Computational Fluid Dynamics with Integeral Transport Neutronics* | 1A |
| Sofu, Tanju | *Evaluation of Turbulence Models for Flow and Heat Transfer in Fuel Rod Bundle Geometries* | 1A |
| Sofu, Tanju | *Thermo Mechanical Calculations for Integrated High Fidelity Reactor Core Simulations* | 4A |



| | Author | Title | Session |
|---|---|---|---|
| | Soldevila, Michel | *Method of Characteristics Applied to a MTR Whole Core Modeling* | 1D |
| | Song, Tae Yung | *A Core Design for a Single Fuel Enrichment in a Self-Sustaining Lead-Cooled Reactor* | 6A |
| | Srivenkatesan, R. | *Studies of Advanced Fuel Cycles in Indian PHWRs and AHWR* | 3C |
| | Steckmeyer, Jean-Claude | *The TRADE Experiment: Status of the Project and Physics of the Spallation Target* | 2B |
| | Stillman, John A. | *Neutronics Design Studies for a 400 MWt STAR-LM* | 6A |
| | Stillman, John A. | *Benchmark Comparisons of Deterministic and Monte Carlo Codes for a PWR Heterogeneous Assembly Design* | 3D |
| | Stogov, V. | *BN-600 Full MOX Core Benchmark Analysis* | 1C |
| | Struwe , Dankward | *The TRADE Experiment: Status of the Project and Physics of the Spallation Target* | 2B |
| | Studer, Etienne | *Neutronic Modeling for a Gas-Cooled Fast Reactor Assuming Coated Fuel Particles* | 5B |
| | Subbotin, Stanislav A. | *Studies of Physical Features of Cascade Subcritical Molten Salt Reactor with External Neutron Source* | 7A |
| | Subbotin, Stanislav A. | *Influence of Nuclear Fuel Cycle Duration and Reprocessing Losses Level on the Nuclear Power System Structure* | 3C |
| | Sukharev, Yu. | *Concept of a Gas Cooled Fast Reactor* | 4A |
| | Sukharev, Yu. | *Possibility to Use Different Fuel Cycles in GT-MHR* | 5B |
| | Sultanov, Nikolay, Sr. | *On the Influence of Differences Between Various Group Microconstant Libraries and Between Different Transport Options on Calculation Results for Cells and Subassemblies of VVER-1000 Reactor* | 4A |
| | Suyama, Kenya | *Validation of Integrated Burnup Code System SWAT2 by the Analysis of Isotopic Composition Data of Spent Nuclear Fuel* | 6C |
| | Suzaki, Takenori | *Analysis of Criticality Change with Time for MOX Cores* | 5C |
| | Suzuki, Tohru | *Source and Reactivity Perturbations in Accelerator Driven Systems with Conventional MOX and Advanced Fertile Free Fuel* | 7C |
| | Szieberth, Máté | *Variance Reduction Techniques for the Monte Carlo Simulation of Neutron Noise Measurements* | 1B |
| T | Tabuchi, Masato | *The Feasibility Study of the Minimum-Shuffling Reloading Strategy for PWR* | 5A |
| | Tadeo, José Luis Montes | *Performance Comparison of Different Absorbent Materials in BWR Control Rods* | 5A |
| | Tahara, Yoshihisa | *Spatially and Temperature Dependent Dancoff Method for LWR Lattice Physics Code* | 8C |
| | Taiwo, Temitope A. | *Assessment of Reduced Moderation Water Reactor Fuel Cycle* | 3C |
| | Taiwo, Temitope A. | *Status of Reactor Analysis Methods and Codes in the U.S.A.* | 1D |
| | Taiwo, Temitope A. | *Neutronics Design Studies of a Lead Cooled, Small Modular Reactor* | 6A |
| | Taiwo, Temitope A. | *Benchmark Comparisons of Deterministic and Monte Carlo Codes for a PWR Heterogeneous Assembly Design* | 3D |
| | Taiwo, Temitope A. | *Low-Conversion Ratio Gas-Cooled Fast Reactors* | 5B |
| | Takeda, Toshikazu | *Neutronics Codes Currently Used in Japan for Fast and Thermal Reactor Applications* | 6D |
| | Talamo, Alberto | *Studies of a Deep Burn Fuel Cycle for the Incineration of Military Plutonium in the GT-MHR using the Monte-Carlo Burnup Code* | 2A |
| | Terremoto, Luis Antonio Albiac | *Sipping Tests on a Failed Irradiated MTR Fuel Element* | 4A |
| | Terry, William K. | *Design of Pebble-Bed Reactors Using a Genetic Algorithm* | 4A |
| | Terry, William K. | *Optimal Moderation in the Pebble-Bed Reactor for Enhanced Passive Safety and Improved Fuel Utilization* | 5B |
| | Thomas, Justin W | *Methodology for Coupling Computational Fluid Dynamics with Integeral Transport Neutronics* | 1A |
| | Tippayakul, Chanatip | *Automated Three Dimensional Depletion Capability for the Pennsylvania State University Research Reactor* | 3B |
| | Todorova, Nadejda | *Sensitivity Studies on Cross-Section Generation and Modeling for BWR Core Simulation Using SAPHYR Code System* | 1D |
| | Todosow, Michael | *Optimization Studies for Seed-and-Blanket Unit (SBU) Fuel Assemblies in PWRs* | 8A |
| | Tommasi, Jean | *Re-Evaluation of SEFOR Doppler Experiments and Analyses with JNC and ERANOS systems* | 5C |
| | Tommasi, Jean | *Analysis of the ZPR-9 Gas-Cooled Fast Reactor Experiments Using JEF-2.2 Data and the ERANOS Code System* | 8C |
| | Totemeier, Aaron | *Radiation Shielding Estimates for Interplanetary Manned Missions* | 4A |
| | Tovesson, Fredrik | *Measurement and Calculation of the 233Pa Fission Cross-Section for Advanced Fuel Cycles* | 7B |
| | Trakas, Christos | *Uncertainty Analysis and Optimization Studies on the Deep-Burner Modular Helium Reactor (DB-MHR) for Actinide Incineration* | 2A |
| | Trakas, Christos | *Benchmark of MONTEBURNS against Measurements on Irradiated UOX and MOX Fuels* | 1B |
| | Travleev, Anton | *Cross-Section Generation for TRADE Fuel* | 4A |
| | Trellue, Holly | *Eigenfunction Convergence and Transmutation Enhancements in MCNPX* | 1B |
| | Tsiboulya, Anatoly | *Uncertainty Analysis Results on BN-600 Hybrid Core Nuclear Physics Characteristics* | 4A |
| | Tsujimoto, Kazufumi | *Research and Development Activities for Accelerator Driven System at JAERI* | 2B |
| | Tudora, Anabella | *Measurement and Calculation of the 233Pa Fission Cross-Section for Advanced Fuel Cycles* | 7B |
| | Tyobeka, Bismark Mzubanzi | *Coupled Neutronics-Thermalhydraulics Calculations for the Safety Analysis of the PBMR.* | 6B |
| U | Uddin, Rizwan | *UIUC's Contribution to Big-10's INIE Project* | 7D |
| | Uddin, Rizwan | *Dynamics of a Reduced Order Model of Natural Circulation BWR* | 4A |
| | Uddin, Rizwan | *Beam Calculation for TRIGA Reactor* | 7D |
| | Unesaki, Hironobu | *Criticality Analysis of Highly Enriched Uranium / Thorium Fueled Thermal Spectrum Cores of Kyoto University Critical Assembly* | 5C |
| | Unesaki, Hironobu | *Analysis of Benchmark Results for Reactor Physics of LWR Next Generation Fuels* | 1C |



| | Author | Title | Session |
|---|---|---|---|
| | Unlu, Kenan | *Thermal Neutron Time-of-Flight Spectroscopy at Penn State using a Single-Disk Chopper* | 7D |
| | Unlu, Kenan | *Modeling of Existing Beam-Port Facility at PSU Breazeale Reactor by Using MCNP* | 7D |
| | Usynia, S. | *Concept of a Gas Cooled Fast Reactor* | 4A |
| V | Valentine, Timothy E. | *New Neutron Cross Section Measurements at ORELA for Improved Nuclear Data* | 7B |
| | Van Dam, Hugo | *Fuel Design and Core Layout for a Gas Cooled Fast Reactor* | 5B |
| | Van Dam, Hugo | *Towards an Improved GELINA Neutron Target* | 2B |
| | Van Dam, Hugo | *Passive Decay Heat Removal in a Fluidized Bed Nuclear Reactor* | 7A |
| | Van Den Durpel, Luc | *Dynamic Analysis of the AFCI Scenarios* | 3C |
| | Van der Hagen, Tim, Jr. | *Fuel Design and Core Layout for a Gas Cooled Fast Reactor* | 5B |
| | Van der Hagen, Tim, Jr. | *Towards an Improved GELINA Neutron Target* | 2B |
| | Van der Hagen, Tim, Jr. | *Passive Decay Heat Removal in a Fluidized Bed Nuclear Reactor* | 7A |
| | Van der Marck, Steven C. | *Calculation of the Effective Delayed Neutron Fraction Using Monte Carlo Techniques* | 1B |
| | Van Heek, A. I. | *PBMR Deep-Burn: A Pebble-Bed HTGR Burning Its Own 'Waste'* | 2A |
| | Van Rooijen, Wilfred | *Fuel Design and Core Layout for a Gas Cooled Fast Reactor* | 5B |
| | Van Siclen, Clinton | *Displacement Kerma Cross Sections for Neutron Interactions in Molybdenum* | 2C |
| | Vasiliev, Alexander V. | *Studies of Physical Features of Cascade Subcritical Molten Salt Reactor with External Neutron Source* | 7A |
| | Vasiliev, Alexander V. | *An Influence of Core Physics Peculiarities upon the Thermal Hydraulics Performance in Cascade Subcritical Molten Salt Reactor* | 4A |
| | Veklotz, Robert J. | *ALAADIN/FLS - A BWR Fast Lattice Design Simulation Tool* | 5A |
| | Venneri, Francesco | *Uncertainty Analysis and Optimization Studies on the Deep-Burner Modular Helium Reactor (DB-MHR) for Actinide Incineration* | 2A |
| | Villamarin, David | *Reactivity Assessment and Spatial Time-Effects from the MUSE Kinetics Experiments* | 3A |
| | Vladuca, Georhita | *Measurement and Calculation of the 233Pa Fission Cross-Section for Advanced Fuel Cycles* | 7B |
| | Vocka, Radim | *Closing the PWR Fuel Cycle with a Molten-Salt Incinerator* | 7A |
| | Vollaire, Joachim | *Reactivity Measurements and Neutron Spectrometry in the MUSE-4 Experiment* | 5C |
| | Voloshchenko, Andrey M. | *Studies of Physical Features of Cascade Subcritical Molten Salt Reactor with External Neutron Source* | 7A |
| | Voloshchenko, Andrey M. | *An Influence of Core Physics Peculiarities upon the Thermal Hydraulics Performance in Cascade Subcritical Molten Salt Reactor* | 4A |
| W | Wagschal, Jekutiel Jehudah | *The Fission Spectrum Uncertainty* | 8B |
| | Wallenius, Jan | *Impact of Heterogeneous Cm Distribution on Proton Source Efficiency in Accelerator-driven Systems* | 2B |
| | Wareing, Todd A. | *Investigating the Use of 3-D Deterministic Transport for Core Safety Analysis* | 5D |
| | Waters, Laurie | *Eigenfunction Convergence and Transmutation Enhancements in MCNPX* | 1B |
| | Weber, David | *The Numerical Nuclear Reactor for High Fidelity Integrated Simulation of Neutronic, Thermal-Hydraulic and Thermo Mechanical Phenomena - Project Overview* | 1A |
| | Weber, David | *Coupled Calculations using the Numerical Nuclear Reactor for Integrated Simulation of Neutronic and Thermal-Hydraulic Phenomena* | 1A |
| | Wehring, Bernard W. | *Thermal Neutron Scattering Cross Sections of Thorium Hydride* | 2C |
| | Wehring, Bernard W. | *Ab Initio Generation of Thermal Neutron Scattering Cross Sections* | 2C |
| | Wemple, Charles A. | *Displacement Kerma Cross Sections for Neutron Interactions in Molybdenum* | 2C |
| | Wenner, Michael T. | *Monte Carlo Modeling of a Time-of-Flight (ToF) Experiment for Determination of Fe Scattering Cross Sections* | 3A |
| | Wenner, Michael T. | *Development of a Methodology for Analysis of the Impact of Modifying Neutron Cross Sections* | 8B |
| | Willermoz, Guy Pierre | *Method of Characteristics Applied to a MTR Whole Core Modeling* | 1D |
| | Willermoz, Guy Pierre | *The Nuclear Heating Calculation Scheme for Material Testing in the Future Jules Horowitz Reactor* | 8C |
| | Willermoz, Guy Pierre | *A New De-homogenisation Method for Local Power Reconstruction* | 3B |
| | Willermoz, Guy Pierre | *HORUS3D Code Package Development and Validation for the JHR Modeling* | 6D |
| | Wilson, Paul | *Feasibility Issues in the Mixed Spectrum Supercritical Water Reactor* | 6A |
| | Woddi, Venkat Krishna Taraknath | *Reactor-Accelerator Coupled Experiments (RACE): A Feasibility Study at TAMU* | 2B |
| | Wolters, Emily | *Effect of Pellet Radial Power and Temperature Distribution on Fuel Assembly Neutronics* | 8D |
| | Woo, Il-Tak | *Application of the Dynamic Control Rod Reactivity Measurement Method to Korea Standard Nuclear Power Plants* | 3A |
| | Worley, Cris | *Validation of SCALE4.4a/CSAS25 for Nuclear Criticality Safety Analyses* | 8C |
| X | Xu, Zhiwen | *Modeling the MIT Reactor Neutronics for LEU Conversion Studies* | 3B |
| | Xu, Zhiwen | *Effectiveness of Different Burnable Poisons in a Long Cycle BWR* | 3C |
| Y | Yacout, Abdellatif M. | *Dynamic Analysis of the AFCI Scenarios* | 3C |
| | Yamaguchi, Mitsuo | *The Experimental Determination of the Effective Delayed Neutron Parameters: Beff, Beff/LAMBDA and LAMBDA of the IPEN/MB-01 Reactor* | 1C |
| | Yamaguchi, Mitsuo | *The Experimental Determination of the Relative Abundances and Decay Constants of Delayed Neutrons of the IPEN/MB-01 Reactor* | 1C |
| | Yamamoto, Akio | *Improvement of the SPH Method for Multi-Assembly Calculations* | 1D |
| | Yamamoto, Akio | *The Feasibility Study of the Minimum-Shuffling Reloading Strategy for PWR* | 5A |
| | Yamamoto, Akio | *Derivation of the Space and Energy Dependent Formula for the Third Order Neutron Correlation Technique* | 4A |
| | Yamamoto, Toru | *Verification of Lattice Analysis Method through BWR UO2 PIE Data Analysis* | 6C |



| | Author | Title | Session |
|---|---|---|---|
| | Yamamoto, Yasushi | *Reduced Moderation BWR with Advanced Recycle System (BARS)* | 6A |
| | Yamane, Tsuyoshi | *Subcritical Experiments in Uranium-Fueled Core with Central Test Zone of Tungsten* | 5C |
| | Yamane, Yoshihiro | *Improvement of the SPH Method for Multi-Assembly Calculations* | 1D |
| | Yamane, Yoshihiro | *Derivation of the Space and Energy Dependent Formula for the Third Order Neutron Correlation Technique* | 4A |
| | Yamaoka, Mitsuaki | *Reduced Moderation BWR with Advanced Recycle System (BARS)* | 6A |
| | Yamasaki, Masatoshi | *The Feasibility Study of the Minimum-Shuffling Reloading Strategy for PWR* | 5A |
| | Yang, Won Sik | *Assessment of Reduced Moderation Water Reactor Fuel Cycle* | 3C |
| | Yang, Won Sik | *Status of Reactor Analysis Methods and Codes in the U.S.A.* | 1D |
| | Yang, Won Sik | *Neutronics Design Studies for a 400 MWt STAR-LM* | 6A |
| | Yang, Won Sik | *A First-Order Spherical Harmonics Formulation Compatible with the Variational Nodal Transport Method* | 5D |
| | Yang, Wonsik | *Neutronics Design Studies of a Lead Cooled, Small Modular Reactor* | 6A |
| | Yoo, Jae-Woon | *Development of an Object Oriented Nodal Code using the Refined AFEN Derived from the Method of Component Decomposition* | 8D |
| | Yoshioka, Kenichi | *Reduced Moderation BWR with Advanced Recycle System (BARS)* | 6A |
| | Youinou, Gilles | *The Physics of TRU Transmutation -- A Systematic Approach to the Intercomparison of Systems* | 3C |
| Z | Zee, Sung Quun | *Methods and Performance of a Three-Dimensional Whole-Core Transport Code DeCART* | 1A |
| | Zeituni, Carlos | *Research Reactor Application to Iridium-192 Production for Cancer Treatment* | 2C |
| | Zeituni, Carlos Alberto | *Sipping Tests on a Failed Irradiated MTR Fuel Element* | 4A |
| | Zhang, Hui | *The Variational Nodal Method in R-Z Geometry* | 5D |
| | Zhong, Zhaopeng | *Benchmarking DeCART (Deterministic Core Analysis based on Ray Tracing) with the VENUS-2* | 6C |
| | Zhong, Zhaopeng | *Methodology for Coupling Computational Fluid Dynamics with Integeral Transport Neutronics* | 1A |
| | Zhou, Quan | *Dynamics of a Reduced Order Model of Natural Circulation BWR* | 4A |
| | Zhou, Tong | *Thermal Neutron Scattering Cross Sections of Thorium Hydride* | 2C |
| | Zhou, Tong | *Ab Initio Generation of Thermal Neutron Scattering Cross Sections* | 2C |
| | Ziedelis, Stanislovas | *The Studies of RBMK-1500 Reactor Core Behavior during Abnormal Operation Transients* | 4A |
| | Zimmermann, Martin A. | *Assessment of CASMO-4 Predictions of the Isotopic Inventory of High Burn-up MOX Fuel* | 6C |
| | Zimmermann, Martin A. | *Uncertainty Analysis Applied to Fuel Depletion Calculations* | 6C |
| | Zwermann, Winfried | *Solution of the C5G7 3-D Extension Benchmark by the SN Code TORT* | 3D |



# PHYSOR-2004 Organizing Committee

***Honorary Chairs***

| | |
|---|---|
| Jacques Bouchard | *French Atomic Energy Commission (CEA)* |
| Charles Till | *Argonne National Laboratory (ANL)* |

***General Chairs***

| | |
|---|---|
| Yoon Chang | *ANL* |
| Massimo Salvatores | *CEA* |

***Technical Program***

| | |
|---|---|
| Phillip Finck, Chair | *ANL* |
| Robert Hill | *ANL* |
| Ray Klann | *ANL* |
| Robert Jacqmin | *CEA-Cadarache* |
| Enrico Sartori | *Nuclear Energy Agency (NEA) of the OECD* |
| James Sterbentz | *Idaho National Engineering and Environmental Laboratory (INEEL)* |

***Publications***

| | |
|---|---|
| Roger Blomquist | *ANL* |

***Finance***

| | |
|---|---|
| Blanca Arroyo | *ANL* |

***Arrangements***

| | |
|---|---|
| Kirsten Laurin-Kovitz | *ANL* |

***Student Program***

| | |
|---|---|
| Thomas Downar | *Purdue University* |

***Workshops***

| | |
|---|---|
| Yousry Gohar | *ANL* |

***Registration***

| | |
|---|---|
| Temitope Taiwo | *ANL* |

***Publicity***

| | |
|---|---|
| John Stillman | *ANL* |

Please contact us with any questions at physor.registration@anl.gov. We'll be happy to help you.